

SOURCES & NATURE
OF THE
OFFICIAL STATISTICS
OF THE
INDIAN UNION

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Dedicated to
The Late Principal B. B. Gupta

PREFACE

Recently, a large number of persons both at home and abroad has evinced keen interest in India's economic problems. For studying these problems objectively they, however, find themselves handicapped by the absence of a book which gives at one place what kind of information exists, where to find it, and what are the errors to which an uninformed use of it may lead. This book represents an attempt on the part of the authors to fill this important gap and to provide a critical survey of the existing sources and nature of India's official statistics.

This volume covers some of the more important topics in the field of official statistics which can reasonably be termed 'economic'. The ground is covered in nine chapters and an appendix. 1. Statistical System in India. 2. Population Censuses. 3. Labour. 4. Agriculture. 5. Industry. 6. Trade. 7. Prices. 8. Banking : includes money supply. 9. National Income : includes regional income, saving and capital formation. *Appendix* : contains some important statistical series. While writing these chapters, the authors have tried to survey all the existing statistical information and also to give references to enable the reader to follow up the subject. It has been the endeavour of the authors to make the study up to date even during the process of printing.

It is hoped that this book would serve as an useful guide to businessmen, administrators, students and research workers, especially in the field of social sciences, who need to interpret the official statistics of the Indian Union.

December, 1969

DBG—MKP

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Statistical System in India

The statistical system in a country like India is largely determined by the range of governmental activities and the manner in and the extent to which statistics are required and used for purposes of administration. In this sense the development of present structure of official statistics may be said to have commenced from the early sixties of the nineteenth century with the setting up of Statistical Committee in 1862 with a view to preparation of model statistical forms for compilation of a uniform system of Imperial Statistics. The forms recommended by the Committee related to the collection of trade, finance, education, judicial, population, agriculture, livestock, mining and industrial statistics, and the local administrators were asked to adapt statistics already possessed by them or available to them to these uniform forms. This led to the publication, in 1868, of the '*Statistical Abstract of British India*', based on the returns of the local administrations, and containing useful statistical information for all the British Provinces. This publication since became an annual feature till 1923. The preparation of the Gazeteers of India containing a mass of useful economic statistics relating to each of the Provinces, which started in 1866 with a study relating to the Madras Presidency marked another important stage in the development of statistics. In 1869, the first Director of Statistics was appointed to produce a comprehensive statistical survey of the country.

The population census of 1872 which gave a count of the total population of the British India with its varied details in terms of sex, age, religion, caste or class, occupation and literacy etc. was another important landmark towards the development of administrative statistics in this country. Further developments of administrative statistics were made in the field of production statistics when data on production of

commodities were compiled in the last quarter of the 19th century. Production statistics of distillaries and breweries became available from 1877, cotton and jute textiles from 1879, woollen textiles and paper from 1884, iron and steel and petroleum from 1890, and kerosene oil from 1900. The Conference on Agricultural Statistics in 1884, the creation of a Statistical Bureau in Calcutta in 1895, its replacement by a Director General of Commercial Intelligence in 1905, the appointment of a Director of Statistics in 1914, introduction of wage statistics among other series, the Reports of the Economic Enquiry Committee of 1925 and the Reports of the Finance Commission and the Royal Commissions on Agriculture and Labour of 1928 and 1930 respectively, the Bowley Robertson Report of 1934 and the Inter-Departmental Committee on Official Statistics of 1945 (briefly known as Gregory Committee) are other landmarks in the development of official or administrative statistics in India during the British period. The development of official statistics in the post-independence period is marked by the establishment of the Central Statistical Organisation in 1951, the Statistical Bureaus in the States (where these did not exist earlier), and the Conference of Central and State Statisticians. During this period an additional stimulus for the development of official statistics was provided by the growing requirements for statistics by international organisations such as the United Nations and its specialised agencies¹ and their attempts to promote standards with a view to securing international comparability.

As mentioned above, various Committees and Commissions were appointed from time to time to look into the Statistical System prevailing in the country during the early part of this century and to make recommendations for streamlining the whole system. The Royal Commission on Agriculture which reported in 1928 examined the general questions of statistical organisation apart from the other questions

1. These include the World Health Organisation, Food and Agriculture Organisation, International Labour Organisation, United Nations Educational Scientific and Cultural Organisation, International Civil Aviation Organisation, Universal Postal Union, International Telecommunications Union, World Meteorological Organisation, and International Monetary Fund.

concerning agricultural statistics. They recommended the appointment of a well-qualified Statistical Officer at each Provincial Headquarter, who would have the status of an officer of the superior Provincial Services and would be entrusted with the task of studying all aspects of the social and economic progress of the province. He would act as the Director of a Bureau of Statistical Information with a small staff of subordinate officials and would eventually be made responsible for coordinating and publishing all provincial statistics.

The Royal Commission on Labour in India which reported in 1931 had its own recommendations to make in regard to Statistical Organisation. In addition to suggesting the establishment of Labour Offices at the various Provincial headquarters on the lines of the Bombay Labour Office and Board of Economic Enquiry on the model of the Punjab Board, the Commission recommended that legislation be adopted, preferably by the Central Legislature, enabling the competent authority to collect information from employers regarding remuneration, attendance and living conditions (including housing) of industrial labour, from merchants regarding prices, from landlords regarding rentals etc. In view of the Commission there was no room for undue fear regarding the possible abuse of such powers by Government Departments and in this connection they proposed the setting up of a statutory body in which representatives of employers, labour and Governments would meet regularly in Conference.

A tangible outcome of the recommendations of the Royal Commission on Agriculture in regard to statistical improvement was the setting up of a statistical section in the newly opened Imperial Council of Agricultural Research which later on came to be known as Institute of Agricultural Research Statistics (I.A.R.S.) in 1960-61. At about the same time, it was decided to revive the publication relating to statistics of internal trade. A scheme for the collection of statistics of industrial production on voluntary basis was also put into effect. The scope of the available wholesale price statistics was enlarged.

The Bowley-Robertson Committee was appointed in 1934 to enquire into the possibility of an Economic Census of India. Messrs Bowley and Robertson covered a very wide ground and in addition to making detailed suggestions in regard to a Census

of Production and the measurement of the National Income, they made a series of recommendations in regard to statistics of production, prices, wages and profits. They also recommended the setting up of an Economic Intelligence organisation under Economic Adviser, and appointments of permanent and whole-time economic staff and statisticians. As a result of the recommendations contained in the Bowley-Robertson Report, the Government of India decided in June 1936, to set up a Central Statistical Organisation at the earliest possible moment but later on the scheme was abandoned due to practical and financial difficulties.

During the Second World War, the inadequacy of existing statistics in India was felt by the Government to a great extent, particularly with reference to the requirements arising from the new responsibilities assumed by the Government in both military and civil spheres of activity. The system had, of necessity, to be strengthened. The coming of independence, with its responsibilities for wider social and economic functions, led to a further demand for statistics and promotion of statistical activities. More important from the point of view of over all economic policy was the need for a single synoptic picture of the information field and for proper coordination and control. As stated earlier the international requirements of various types of statistics also helped in the development of an integrated statistical system. It was only in 1951 that a Central Statistical Organisation was set up in India for meeting the above purposes.

Nature and Structure of the Indian Statistical Organisation

The Indian statistical system is broadly decentralised. Its structure is primarily a consequence of the division of responsibility between the Central and State Governments in a federal constitution and the growing needs of individual ministries for statistics for their own administrative functions. Under the Indian Constitution, this responsibility is shared in accordance with a threefold classification of subject fields. Items like foreign trade, banking and currency, and population are wholly allocated to the Central Government, others like agriculture and education are assigned to the States. There is also a common category of concurrent subjects, for example, industry where

both the Central and State governments operate simultaneously to meet their respective requirements. In actual practice, there exists an understanding that, even in field, where the States have the primary responsibility for the collection of statistics, the Central Government acts as the coordinating authority for the presentation of the data on an all-India basis. Even in the Central Government there is a division of subjects among the various ministries. Thus, the responsibility for the collection and processing of data devolves on statistical organisations in the different ministries of the Central Government and in the several departments of the State Governments.

The number of Statistical agencies at the Centre was 102 with an expenditure of about Rs. 4.7 crores in 1966 while the corresponding number of agencies was about 270 with an expenditure of about Rs. 4.5 crores in all the States and Union territories.

The Central Statistical Organisation (CSO) set up in 1951 as an attached office of the Cabinet Secretariat of the Government of India has been serving as a coordinating and advisory body. The Government of India has since set up a Department of Statistics in the Cabinet Secretariat in 1961 and entrusted it with the responsibility for bringing about necessary coordination between various statistical agencies. In its functions the Department is assisted by the CSO and has the benefit of advice from the Central Technical Advisory Council on Statistics, and a Standing Advisory Committee for the Department of Statistics. During recent years all the States have set up State Statistical Bureaus. The State Statistical Bureaus have the responsibility for overall coordination within their respective territories.

Statistical Organisations in the Central Government

Most of the ministries in the Government of India collect or use statistics in some manner or other and have their own statistical units. They are of different sizes and at varying stages of development and charged with distinctive types of functions. However, they may be divided into the following broad categories :

1. Organisations processing data coming as by products of administration ;

2. Organisations associated with control agencies ;
3. Organisations specially set up for collection and compilation of data ;
4. Research organisations ;
5. National Sample Survey and other sampling survey organisations ; and
6. Central Statistical Organisation.

1. Organisations processing data coming as by products of administration : In this category are included a large number of organisations located in the administrative departments and engaged in the processing of the data flowing in from day to day work. Examples of this type are the statistical offices of the Central Board of Revenue, Railways, Post and Telegraphs, and the Directorate General of Supplies and Disposals.

2. Organisations associated with control agencies : A second important category comprises the statistical units in the various departments of the Government of India set up to control production and distribution of commodities and utility services. Offices like that of the Textile Commissioner and Iron and Steel Controller maintain well organised statistical units and the statistics published by them are of permanent value and are used by other Government organisations and the public.

3. Organisations set up for the collection and compilation of data : This category includes the various organisations established by the Government specifically for the function of collection and compilation of statistical data. These are : (a) Office of the Registrar General, India ; (b) Directorate General of Commercial Intelligence and Statistics ; (c) Industrial Statistics Wing of Central Statistical Organisation ; (d) Labour Bureau ; (e) Directorate of Economics and Statistics ; (f) the Indian Army Statistical Organisation ; (g) Office of the Economic Adviser to the Government of India. The detailed functions of these organisations and units have been spelled out in the following sections.

(a) National Census Organisation and the Office of the Registrar General, India : In the 19th century, statistics were mostly by products of administration, with the exception of the population census which constituted an attempt on the part of the Government to collect statistics for its own sake. The first official census was taken in 1872. Beginning with 1881, the

census has since been taken once every ten years. In the earlier censuses, the practice was to establish a Census Office in the Ministry of Home Affairs just a year or two before the census date on a temporary basis and then to close it as soon as the census operations were over and the reports were published. With the passing of the Indian Census Act 1948, the Office of the Registrar General, India, was established on a permanent basis to pay continuing attention to the population census work. The Registrar General is designated as ex-officio Census Commissioner under this Act.

In February 1960, the work of collection, compilation, publication and improvement of vital statistics was transferred from the Ministry of Health to the Office of the Registrar General, India. Since then, this office is engaged on the question of bringing improvements in the registration system of births and deaths in the country. A number of schemes for this purpose are in operation :

Besides bringing out the Census Reports, this office brings out (i) *Vital Statistics of India (annual)*; and (ii) *Indian Population Bulletin*.

(b) *Directorate General of Commercial Intelligence and Statistics* : Set up in 1895, this organisation was till the Second World War the Central Statistical office responsible for collection, consolidation and publication of important statistical series. With the formation of statistical units in the different Ministries during the war, many of the former functions of this office were transferred to the appropriate Ministries and became solely responsible for commercial intelligence and trade statistics.

(c) *Industrial Statistics Wing of the Central Statistical Organisation* : Although the government conducted an *ad-hoc* investigation on prices on a country-wide scale in 1910, no new fact-finding organisation on a continuing basis was set up till the beginning of the Second World War. The need for comprehensive statistics of production and the difficulty in obtaining reasonably complete and accurate data on a voluntary basis led to the enactment of the Industrial Statistics Act in 1942 and the setting up of a Directorate of Industrial Statistics in 1944 for implementation of the Act. It was subsequently transferred to the Cabinet Secretariat in 1957 and has been functioning as

the Industrial Statistics (I.S.) Wing of the C.S.O. The Directorate conducted the annual 'Census of Manufacturing Industries' from 1946 to 1958. It is compiling and publishing the monthly statistics of production of selected industries and preparing a monthly index of industrial production. Meanwhile a subsequent enactment, viz. the Collection of Statistics Act 1953, had replaced the Industrial Statistics Act 1942 and the Census of Manufacturing Industries is now known as 'Annual Survey of Industries' which has greater coverage and scope and was started in 1959 on a statutory basis. The data under the Annual Survey of Industries are collected with the help of the field staff of the Directorate of National Sample Survey who work under the Statistics Authority in each State.

Besides the above, the I.S. Wing is also engaged in the work relating to (i) development of the scope and coverage of the existing industrial statistics and periodical revision and refinement of index of industrial production, (ii) extension of other fields such as survey of distributive trade, (iii) coordination of work relating to the improvement of India's foreign and inland trade statistics and shipping statistics.

(d) *Labour Bureau*: Because of rapid rise in prices during the Second World War which led to labour unrest, a Cost of Living Index Directorate was set up by the Ministry of Labour to conduct family budget enquiries in 26 industrial centres during the years 1943-46. In October 1946, the Government of India set up a Labour Bureau in which the Cost of Living Directorate was merged. The Labour Bureau has the following main functions :

- (i) collection, compilation and publication of labour statistics, including examination of statistical methods with a view to adoption of uniform and scientific techniques;
- (ii) construction and maintenance of consumer price index number;
- (iii) conducting research into specific problems with a view to furnishing data required for the formulation of labour policy; and
- (iv) bringing out pamphlets and brochures on various aspects of labour legislation and other statistical work relating to labour affairs in the country.

The Labour Bureau conducted a number of *ad-hoc* family budget enquiries for industrial workers in 1958-59. The Bureau compiles and publishes consumer price indices for industrial workers.

(e) *Directorate of Economics and Statistics, Ministry of Food and Agriculture*: The Directorate of Economics and Statistics was set up in 1947 under the Ministry of Food and Agriculture in pursuance of the decision of the Government of India to centralize all services in the field of agricultural economics and statistics. The Directorate is responsible for the collection, compilation and publication of all agricultural statistics on all-India basis. The data cover the fields of agriculture, fisheries, livestock and forests; and are collected mostly by State governments in prescribed forms. The Directorate also collects agro-economic data and advises the Ministry on matters of agro-economic policy.

(f) *The Indian Army Statistical Organisation*: The Indian Army Statistical Organisation was set up in 1947 and performs the following functions :

- (i) maintenance of basic statistical records and the regular compilation and supply of data regarding personnel, vehicles, armament and equipment, animals and accommodation etc.;
- (ii) control of reports and returns emanating from Army and Command Headquarters;
- (iii) technical advice on statistics in the army; and
- (iv) design, conduct and analysis of sample surveys, experiments and investigation.

The Army Statistical Organisation has one of the largest installations in India for mechanical tabulation of data. There is also a research unit connected with application of sampling methods to surveys etc.

(g) *Office of the Economic Adviser to the Government of India*: Set up in 1933, this Office is an attached office of the Ministry of Industrial Development and Company Affairs. The Statistical Wing of this office functioned as the central co-ordinating authority in the field of statistics for the Government of India till the formation of the Central Statistical Organisation in 1951. At present its statistical functions are to maintain wholesale prices and price data in general. It publishes the index number

of wholesale prices in India on a weekly basis. It also acts as the coordinating unit between various statistical units of the Ministry and as liaison between the Ministry on the one hand and the Central Statistical Organisation and Planning Commission on the other.

4. Research Organisations :

(a) *Statistical Division of the Indian Council of Agricultural Research* : The Statistical Division of the Indian Council of Agricultural Research (ICAR) (now known as the Institute of Agricultural Research Statistics) is primarily a research organisation in the field of agricultural statistics and was set up in accordance with the recommendations of the Royal Commission on Agriculture in 1928. Its functions are :

- (i) to advise on the planning of agricultural and animal husbandry experiments;
- (ii) to scrutinize statistical programmes and progress reports of the council and papers received for publication in the Council journal;
- (iii) to carry out fundamental research on the application of statistical methods to agricultural and animal husbandry problems;
- (iv) to impart training in agricultural and animal husbandry statistics ; and
- (v) to carry out sample surveys for the improvement of agricultural livestock and fisheries statistics

It has done pioneering work, among other things, in introducing the method of random sampling for the estimation of yield of crops and evolving suitable techniques for experimentation in cultivators fields. The Division maintains a centre for research and training in agricultural statistics and also holds examinations for the award of certificates and diplomas in agricultural statistics.

(b) *Research Department, Reserve Bank of India* : The Research Department of Reserve Bank of India in Bombay works in four departments. The Division of Monetary Research in collaboration with other Divisions, produces the *Annual Report of the Bank*, the *Report on Currency and Finance* and various monthly and quarterly reports for the use of the Bank, Government departments and the public. This Division attends also to specialized research work relating to stock exchange,

bullion markets, public finance and banking problems. The Balance of Payments Division compiles half-yearly statements relating to India's balance of payments and undertakes special studies on related problems including a census of foreign liabilities and assets. It also prepares information required by the International Monetary Fund. The Statistics Division is engaged in compilation of statistical data for publication in the *Reserve Bank of India Bulletin* (monthly) and also data for the Bank's own internal use which includes a series of index numbers of prices of industrial securities, agricultural and industrial production, profits of joint stock companies and so on. The Rural Economic Division carries out surveys of agricultural indebtedness, rural credit, etc. and makes studies relating to rural finance.

5. The National Sample Survey and other Sample Survey Organisations : The difficulties in the way of expeditious collection of data on a comprehensive basis and the limitations of cost and manpower resources brought to the forefront the possibilities of economic surveys on a sampling basis and the setting up of sampling organisations. The most important of such organisations is the National Sample Survey (NSS) set up in 1950 in the Ministry of Finance for collecting comprehensive information on all aspects of the national economy on a continuing basis, as required by the National Income Committee, Planning Commission and other Ministries of the Government of India. The Directorate of National Sample Survey was transferred to the Cabinet Secretariat in 1957.

The NSS Directorate has been conducting multipurpose socio-economic sample surveys in the form of rounds. In July 1969 it has entered in its 24th round. Up to the 13th round the field enquiries were of varying period ranging from 3 to 8 months. From 14th round onwards, the survey period has been made of 12 months duration. Each round of the NSS now coincides with the agricultural year. The programme for each round is decided by the Department of Statistics in collaboration with the concerned ministries and state governments. The responsibility for technical guidance and tabulation of data rests with the Indian Statistical Institute.

A few other sampling organisations were also set up on ad-hoc basis from time to time, e.g. the All-India Agricultural

Labour Enquiry by the Ministry of Labour, the Rural Credit Survey of the Reserve Bank of India.

6. *Central Statistical Organisation* : The Central Statistical Organisation (CSO) was set up in the Cabinet Secretariat in 1951 with coordinating and advisory functions, e.g. coordination of statistical activities at the Centre and the States, advisory work relating to statistical matters, providing national statistical data to the United Nations and other international organisations like the Food and Agricultural Organisation, International Labour Office, World Health Organisation etc., bringing out regular publications, and a graphical presentation of economic and social statistics. In recent years, the functions of the CSO have tended to expand by the transfer of the National Income Unit from the Ministry of Finance to the CSO in 1954, transfer of the Directorate of Industrial Statistics in 1957 which at present functions as the Industrial Statistics Wing of the CSO, setting up of a separate unit to look after statistical work relating to planning in collaboration with the Planning Commission, expansion of training facilities for statistical personnel ; compilation and publication of the consumer price index numbers for non-manual employees etc.

With the formation of Department of Statistics in the Cabinet Secretariat in April 1961, the CSO has been functioning as a part of this Department. Besides the Industrial Statistics Wing at Calcutta, the CSO has the following Divisions at its headquarters in Delhi :

- (a) Industry and Trade Division, including Small Industries Unit,
- (b) Manpower Research Division,
- (c) Methodology Division,
- (d) National Income Division,
- (e) National Sample Survey Division,
- (f) Planning and State Statistics Division,
- (g) Population Division,
- (h) Prices and Cost of Living Statistics Division,
- (i) Statistical Intelligence Division, and
- (j) Training Division.

Besides the main statistical organisation described above, the various ministries and departments also have statistical set. These are : The Statistical Section of the Textile Com-

missioner ; the Statistical Branch, Office of the Iron and Steel Controller; the Statistical Division, Office of the Chief Controller of Imports and Exports ; Statistical Section, Ministry of Education ; Statistical Section, University Grants Commission; Statistics and Intelligence Branch, Central Excise ; Statistical Branch, Directorate of Inspection (RS&P) ; Statistical Section, Directorate of Sugar and Vanaspati ; Statistical Section, Directorate of Marketing and Inspection, Ministry of Food and Agriculture ; Administrative Intelligence Section, Department of Community Development ; Statistical Bureau, Directorate General of Health Services; Statistical Division, Office of the Chief Inspector of Mines ; Statistical Unit of the Programme Evaluation Organisation, Planning Commission ; Statistical Directorate, Railway Board; Statistical Division, Central Water and Power Commission ; Statistical Section, Roads Wing ; Statistics Section, Director General of Posts and Telegraph ; Statistical Unit, National Buildings Organisation. These divisions and sections are mainly engaged in the collection, compilation and publication of statistics which emerge as a by product of administration or which are required for planning purposes. Some of these organisations are engaged in conducting sampling enquiries of specialised nature and conducting research in their respective fields. There are many other statistical sections and units in other departments and offices of the Central Ministries which have not been mentioned above. These are small units but have broadly the same functions as the above units. They have emerged mainly during the fifties as a result of planning.

Statistical Organisation in the States

Statistical organisations in the States are of more recent origin than their counterparts at the Centre, although some of the statistical sections in the Departments of Labour or Agriculture were set up in the 1930's. As former British Indian Provinces, they were collecting certain statistics for the Centre on what were called 'standardised imperial tables' on subjects like agriculture, education, labour, vital statistics, excise duty, etc.

State Statistical Bureaus : Since the war years, and particularly in the wake of the recommendations of the Gregory Committee of 1945, State Statistical Bureaus have been

set up in most of the States either as independent statistical organisations or as part of the combined economic and statistical set up. The Conference of Central and State Statisticians which was held annually from 1951 to 1960 with the purpose of coordinating the activities of the Statistical Bureaus, expansion of their programmes and for discussions on planning and other statistics etc. gave a further fillip to the setting up and strengthening of these organisations. From 1961 this Conference of Central and State Statisticians came to be known as the Central Technical Advisory Council on Statistics. Under a programme of Central financial assistance under the Five Year Plans, the functions and the activities of all Statistical Bureaus have also grown during recent years. Even in Union Territories small statistical units for catering to the requirements of planning statistics have been set up. Since 1964 all the States and Union Territories are having either a Directorate of Economics and Statistics or a Department of Statistics for looking after all types of statistical work.

The State Statistical Bureaus are generally entrusted with the task of (i) coordinating of statistics collected by different departments, (ii) publication of an annual Statistical Abstract and monthly/quarterly bulletin assembling all essential serial statistics of the State/Union Territory, (iii) liaison between the various statistical departments in the State and the CSO and other organisation at the Center, (iv) organising special enquiries and surveys, (v) compilation of economic indicators and state income estimates, and (vi) statistical work relating to planning. There are, however, considerable differences between the different State Statistical Bureaus in the areas of their responsibility for collection of statistics. Thus, while in some States, statistics are almost centralised in the Bureau, in most other States the collection of agriculture, labour and vital statistics generally fall outside the scope of work of the State Statistical Bureaus.

As has already been said, the National Sample Survey has been conducting multipurpose socio-economic enquiries in the form of rounds. From the eighth round onwards the States also started collaborating in these socio-economic enquiries. Now practically all the State Statistical Bureaus with the exception of Nagaland and West Bengal are participating in the N.S.S. programme on a full matching basis. This has

enlarged the scope of the works of the State Statistical Bureaus considerably. Most of the States are now having mechanical tabulation units for processing N.S.S. data. Some of the Bureaus are conducting socio-economic enquiries on subjects not covered in the N.S.S. on their own to meet their specific requirements. Recently the Bureaus have been conducting annual sample census on population, births and deaths at the instance of the Registrar General, India. Recently the State Statistical Bureaus have been assigned the work of computing state income.

In order to broad base Indian economic development and to enable the country to plan from below, i.e. with districts/development blocks as a unit, need for regular and timely availability of comprehensive statistical data at the district and development block levels was keenly felt. It was found that the relevant statistics were lacking mostly at these levels. To meet this need District Statistical Offices have been set up in most of the districts all over the country during the Second and Third Five Year Plans. For planning activities at the block level, statistical assistants (in certain states known as Progress Assistants, Statistical Officer, (extension) etc. have been appointed in the development blocks.

Statistical Units in State Departments: Besides the Statistical Bureaus in the States, there is a net work of nucleous statistical units attached to different State Departments which collect, compile, collate and publish the statistics required for the operational needs of those departments in the States or at the instance of their counter-parts at the Centre.

Indian Statistical Institute

An account of the statistical organisation in India would not be complete without reference to the Indian Statistical Institute, Calcutta even though it is a non-official organisation. It was established in 1932 and has developed itself in three different ways viz. as a learned society, as a centre of research and training and as an agency for conducting large-scale statistical projects. A special feature of the work of the Institute is the close integration of research, training and the application of statistical methods to a wide range of problems such as the survey of agricultural crops, study of rainfall, floods, and social and economic inquiries. Since 1938 the Institute has been

holding examination for the award of certificates and diplomas of proficiency in statistics. In accordance with a decision of the Government of India in 1952 the Institute is now functioning as a focal centre for professional training and research and as a national statistical and computational laboratory in India. In recognition of its work the Indian Parliament through the enactment of the Indian Statistical Institute Act, 1959, declared it as an institution of national importance and empowered it to confer degrees in statistics. Accordingly, the Institute has since 1960 started courses of study for the degree of Bachelor of Statistics (B. Stat.) and Master of Statistics (M. Stat.). As a centre for professional training in statistics, the Institute has expanded and re-organised its training activities in recent years, in order to meet the growing demand for trained statisticians. Among the training courses organised by the Institute, mention may be made of six to nine months officers' training course in statistics in collaboration with the C.S.O. and technical training for computers field investigators and operators of machine tabulation.

The Indian Statistical Institute (jointly with the International Statistical Institute and the UNESCO) also conducts the International Statistical Education Centre at Calcutta. This is a nine-months training programme for students from Asian countries. The Centre has so far conducted 18 training courses during the course of 15 years.

The Indian Statistical Institute, since the setting up of the National Sample Survey Organisation, is incharge of all its technical work. This includes design of the survey, preparation of the schedules, tabulation of data and report writing. The Institute has got practically the largest mechanical tabulation system in India for this and other related work of the Institute. The Institute has also established branches in different parts of India and has an organ of its own "*The Sankhya*".

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economic and social data pertaining, at a specified time or times, to all persons in a country or delimited territory".

It would be seen from the above definition that the census operations are not restricted to the collection of statistics alone but involve all types of compilation and even publication of the results. Moreover, it is not restricted to the publication of total count of the population alone but relates to the publication of the data in all their varied form which may include the classification of all persons in the country by sex and age, marital status, rural/urban residence, educational standard, and economic activity, etc. All these data are collected at the time of the census.

According to the same U.N. document, the essential features of an official nations census are :

1. *Sponsorship* : Censuses are undertakings requiring a vast organisation and involving considerable expenditure. For a proper census, an extensive administrative machinery has to be mobilized for a short period of time and necessary legislation is required to give it legal authority. For carrying out the vast operations, the national governments enlist the cooperation of provincial and local governments each of which receives some responsibility for the carrying out of the census.

2. *Defined territory* : Population figures have no meaning unless they refer to a precisely defined territory. The territory covered, along with any changes in its area in successive censuses, should be clearly and explicitly stated.

3. *Universality* : The enumeration should include every member of the defined territory to which the census relates without omission or duplication. In doing so, it is necessary to specify whether it includes persons of the nationality of the country who are at sea or stationed in other countries in the foreign missions or otherwise.

4. *Simultaneity* : The total population enumerated should refer to one well-defined point of time. As a general rule, a day and time (moment) is fixed to which the total count of the population relates. This moment is often fixed at midnight. But in the case of Indian Census, it is the sun-rise.

At this point it would be appropriate to make differentiation between the *de facto* and the *de jure* concepts of population. Under the *de facto* concept, persons are counted at the place at "they were at the time of the census, and in this case the

time reference is usually extended to the entire night of the census so that persons are counted at the place where they spent most of the night. Under the *de jure* concept, persons are counted at their normal place of residence and the census operations are usually extended over a number of days even though the data relate to a particular point of time.

Although it may appear simple in theory to say that the census is taken on a certain day, and that the particulars relating to the persons enumerated refer to a certain hour of that day, yet in practice this ideal cannot be completely achieved. It can, however, be more nearly approached if the choice of date of enumeration is so made that the displacement and movement of population is at a minimum.

5. *Individual units*: Census data must be collected separately for each individual enumerated so that detailed classifications may be provided in all the required combinations.

6. *Compilation and publication*: The compilation and publication of data by geographic areas and by basic demographic characteristics is an integral part of a census as mentioned earlier.

History of the Indian Census

The tradition of taking periodic and scientifically designed censuses extends back for more than 150 years in many modern countries. The first census in Sweden was taken in 1749 and the first census in the USA was taken in 1790. Since then the tradition of census taking has continued to grow in scope and coverage and more and more countries have realized the importance of the census of population, so much so, that in the decade from 1955 to 1964, at least 150 countries or areas took population census collecting individual data on nearly 2179 million people out of an estimated world total of 3215 million people, thus having a coverage of 67.8 per cent. In this respect the Indian Census is comparatively new. The first census of India with the modern concept was taken in 1872, although population censuses were conducted for individual areas prior to that date also, for example, census of population for the province of Agra was conducted for the first time in 1826 on the basis of a complete enumeration of the villages and a partial count of the houses. After 1872 the next census was taken in

1881 and since then, a census has been conducted in India after every ten years, the census of 1961 being the tenth in the series.

The Indian census before 1951 was a *de facto* or synchronous one. Census enumeration throughout the country was taken on a particular night except for snowbound and inaccessible areas where the census was taken at different periods. Elaborate arrangements had, therefore, to be made for enumeration of travellers by train, road, etc. This usually involved stopping all movements of the population for at least a few hours. The census had therefore to be taken on a day when the movement of the population would be minimum in the country. Since this was difficult to have on a fixed date every decade, the reference date naturally varied from census to census i.e. February or March upto the census of 1931. Since 1941, the reference date has been fixed as the sun-rise of 1st March. The following table gives the reference dates of the Indian censuses :

<i>Year</i>	<i>Reference date</i>
1872	21 February
1881	17 February
1891	26 February
1901	1 March
1911	10 March
1921	18 March
1931	26 February
1941	1 March
1951	1 March
1961	1 March

After the 1931 Census simultaneous enumeration of the whole population was given up and the enumeration was spread over a period of time (about three weeks).

Data collected in the various censuses

In this section, an attempt is made to give in some detail the type of information collected in different censuses starting from the first one till the 1961 Census about the people of the country. It will be interesting to compare how the census questionnaire has developed over the period of practically one century. The chart shows the actual questions asked in the last ten censuses.

It can easily be seen from this chart that name for identification purposes, sex, age, religion literacy, and birth place have found a place in the questionnaire of all the ten Censuses.

In the matter of recording age there were some differences. In 1872, age on next birth day was recorded. From 1881 to 1921 and also in 1951 and 1961, age completed on the last birthday was recorded. In the 1931 census, the nearest age in years was recorded. In 1941, the age was recorded in years and months.

In the case of literacy, the definition of literacy has always been "ability to read and write". In practically all the censuses additional information on literacy was sought to be collected. In the 1872 Census, information was sought on youths upto age 20 years attending school, college or under private tuition. In 1881, a distinction was sought to be made not only between persons who were literate or illiterate but also between persons under instruction and not under instruction separately among literates. In 1891, the literacy question included learning or under instruction and there was an additional question on language in which literate. In Censuses 1901 to 1941, information was also collected on literacy in English. In the 1941 and 1951 Censuses, information was also collected on partial literacy *i.e.* ability only to read and on standard of education. Information on partial literacy was not collected in the 1961 Census but information on highest standard of education attained was recorded.

Right from the Census of 1872 till the 1941 Census, there was a question on caste, tribe or race which was recorded as returned by the person enumerated. At the 1951 Census, the return of caste was restricted only to Scheduled Castes and Scheduled Tribes. Anglo-Indians were also separately recorded. In addition to these, individual castes and tribes treated as backward classes by each State Government were recorded for the respective States. At the 1961 Census, the name of the Caste or Tribe in the case of only Scheduled Castes and Scheduled Tribes was recorded.

After the Census of 1872, Nationality as a separate question figured only in 1951 and 1961 Censuses.

Infirmity as a question figured from 1872 to 1931. This question was given up in 1941.

Mother Tongue : A question on mother tongue was asked from 1881 though the nomenclature of the question varied from census to census. In the Censuses of 1881, 1941, 1951 and 1961, the question was 'mother tongue'. In 1891, the question was 'parent tongue'. In 1901, the question was 'language ordinarily used'. In 1911, the question was 'language ordinarily spoken in the household'. In 1921 and 1931, the question was 'language'. In 1881 and 1891, mother tongue was defined as the language spoken by the person's parents. In the Censuses of 1901 to 1931, the language returned as ordinarily used in one's own home was recorded. In 1941 and 1951 mother tongue was defined as language first spoken from the cradle. In the 1961 Census, mother tongue is defined as language spoken in childhood by the person's mother to the person or mainly spoken in the household.

From the 1931 Census, besides mother tongue, there was a record of any language or languages which a person knew or commonly used. In the 1931 Census, all languages, including any foreign language that a person knew, were recorded but in the 1941 Census it was confined only to Indian languages. In the 1951 Census, this restricted only to one Indian language commonly spoken by a person in addition to his mother tongue. In the 1961 Census, two languages were recorded, whether Indian or foreign, which a person could speak and understand best and could use with facility in communicating with others.

Classification by Occupation : As regards economic questions, there was only one question which related to occupation in the 1872, 1881 and 1891 censuses. In 1872 and 1881, the number of actual workers were recorded and were classified according to occupation. In the 1891 Census, the concept was changed by introducing the words 'means of subsistence'. Occupation was recorded in the case of every individual, male and female, while in the case of workers their actual occupation was recorded ; in the case of dependents, the occupation of the person on whom they were dependent was recorded. In the 1901 and 1921 Censuses there were three questions on occupation ; two questions were on the principal and subsidiary occupation of actual workers and the third question was for recording in the case of dependents the occupation of the persons on whom they were dependents. Here also the same term, viz.,

occupation or means of subsistence, was used as in the case of the 1891 Census. In all these censuses the term 'actual worker' also included persons who were in receipt of income without doing work such as rentiers etc.

In the 1931 Census, instead of the actual workers, the term 'earner' was used. The population was classified into earners and dependents. Among the dependents, a distinction was made between 'working dependents' who though dependent nevertheless worked and had an occupation, and other dependents who did not do any work and had no occupation. The principal occupation was recorded in the case of an earner as well as a dependent. It was the actual occupation in the case of the earner and the occupation of the person on whom he was dependent in the case of a dependent. In the column relating to subsidiary occupation, any occupation other than the principal occupation of an earner as well as the actual occupation of the working dependent was recorded. There was also a question on industry in the 1931 Census.

Means of livelihood : In the 1941 Census there were eight economic questions. At the out-set the population was divided into three categories, viz., wholly dependent, partly dependent, and independent. The concept of occupation or means of subsistence was adopted but the term 'occupation' was dropped and only 'means of livelihood' was used. In the case of persons who were wholly or partly dependent, the means of livelihood of the person on whom they were dependent was recorded. In the case of persons who were not dependent wholly or partly, their own means of livelihood was recorded. In addition to recording these primary economic data there were questions on paid assistants employed, unemployment, search for employment, seasonal employment and industry.

In the 1951 Census, the concepts adopted were the same as in the 1941 Census, the terms used being self-supporting, earning dependent, and non-earning dependent corresponding to the independent, partly dependent and wholly dependent of the 1941 Census. In the case of self-supporting persons their means of livelihood was recorded. Provision was made for the recording of a principal and a secondary means of livelihood. In the case of earning dependents, the means of livelihood of the person on whom they were dependent was recorded under

principal means of livelihood and their own means of livelihood under secondary means of livelihood. In the case of non-earning dependents, the means of livelihood of the person on whom they were dependent was recorded under principal means of livelihood.

In the 1961 Census there were five economic questions. A worker was recorded as working as cultivator, or as agricultural labourer, or at household industry or doing any other work according to the work he was doing. If he was working at more than one of the above categories, he was so recorded. In the case of a person working at household industry, the nature of his work, the nature of the household industry and whether he was an employee was also recorded. In the case of a person who was doing work other than as cultivator, as agricultural labourer or at household industry, the nature of his work, the nature of industry, profession, trade or service in which he was working was recorded. In addition, it was recorded whether he was an employer, employee, single worker or family worker. The name of the establishment in which he was working was also recorded. In the case of those who were not working, their activity was recorded under different categories.

Improvement in the Census Schedules or Questionnaires

From the chart comparing the census schedules and questionnaires given in the previous section it would be seen that the census schedule or the questionnaire underwent some change or the other from one census to another. These changes were caused by the requirements of the State for various administrative and planning purposes. They also depended to a great extent on individual Census Commissioners entrusted with the task. Another factor which entered into deciding the various changes was the extent of usability of the tabulated data. Although continuity for the sake of comparison is one important factor and to some extent it was retained but for a greater extent it was sacrificed in favour of other improvements.

Planning of a Census

In the preceding sections we discussed the definition and essential features of a census, the historical background and the census questionnaires or schedules used in the

Indian Censuses since their inception. We now see as to what goes into the planning of the full-fledged census operations and shall consider it with reference to the 1961 Census of India. Regarding the elements of a census plan, the U.N. document, *Principles and Recommendations for National Population Censuses*, states:

"The careful planning of a census is of prime importance both for statistically advanced countries and for those with less statistical experience. A small oversight in planning may lead to serious defects and inefficiencies. All censuses cannot follow a fixed and uniform pattern, but the following list containing the most common major elements of a census plan is an illustration of the points to be considered in planning a census.

A. Legal basis for a census:

1. Scope of the census programme;
2. Determination of office responsible for census;
3. Cooperation among government agencies at various levels;
4. Other legal provisions for the census.

B. Financial and personnel estimates :

1. Preliminary estimates of census expenses;
2. Final budget estimates for the period of the Census;
3. Final personnel estimates for census operations.

C. Objectives and calendar of operations:

1. Determination of objectives and general programme of the Census;
2. Preliminary detailed calendar of required operations.

D. Census organisation and administration:

1. Organisation and operation of central office;
2. Organisation and operation of field offices.

E. Preparatory field work:

1. Determination of territorial division;
2. Preparation of maps for enumeration areas;
3. Preliminary listing of dwellings and household.

F. Preparation of questionnaires :

1. Determination of content of questionnaire (considering views of other ministries and of non-governmental users);
2. Determination of the final form of the questionnaire

- after necessary testing;
- 3. Preparation of definitions and instructions for the enumeration;
- 4. Printing of questionnaires and instructions.
- G. Content of tabulation programme:*
 1. Minimum tabulation programme;
 2. Additional desirable tabulations.
- H. Plan of enumeration:*
 1. Determination of basic procedures and control of the enumeration;
 2. Determination of the plan for the control of the quality of the data collected;
 3. Estimation of population for the distribution of questionnaires—load of work, and number of enumerators required.
- I. Plan of sampling application:*
 1. Scope of the sampling application plan;
 2. Determination of details concerning sampling operations.

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- J. Plans for data processing:*
 1. Determination of processing methods (including decisions regarding type of machines and card design if mechanical equipment is to be used);
 2. Organisation and administration of the data processing work;
 3. Consideration of work loads for personnel and equipment;
 4. Preparation of processing form, e.g. tally sheets, punched cards, etc);
 5. Preparation of materials on processing e.g. instructions for the preliminary hand tally and for coding, editing, verification, punching, tabulation etc.
 6. Training of personnel.
- K. Plans for publication:*
 1. Plans for the census publication;
 2. Preparation of table forms;
 3. Graphic presentation and text;
 4. Printing facilities.
- L. Census tests:*
 1. Test plan;

2. Census test—enumeration and (where applicable) tabulation;
3. Analysis of the results of the census test.

M. Publicity:

1. Design of publicity programme for census;

2. Implementation of publicity programme.

N. Recruitment and training of staff for enumeration:

1. Selection of field supervisors and enumerators;

2. Training programme for field personnel.

O. Survey of areas by enumerating staff.

- P. Distribution of enumeration materials to operating offices.

Q. Receiving and checking of questionnaires:

1. Receipt and examination of the questionnaires;

2. Verification of the completeness of coverage.

R. Enumeration:

1. Supervision of the enumeration;

2. Collection of census data.

*S. Post enumeration checks and studies of census accuracy and validity.**T. Compilation and tabulation (manual or mechanical).**U. Publication:*

1. Publication of preliminary results;

2. Publication of final results;

3. Publication of administrative reports.

V. Studies and research:

1. Preparation of special surveys and analytical studies;

2. Preparation of files on census experience and methods for future use.”

The 1961 Census

An elaborate census act (The Census Act 1948) exists in the statute books of the Indian Union empowering the Central Government to take census in India or any part thereof whenever necessary or desirable. The Act, among other things, provides for the appointment of Census staff, calling for public assistance for taking the Census, confidentiality of individual records and penalties for breach of provisions of the Act.

In India, the responsibility of conducting the population census rests with the Ministry of Home Affairs of the Union

Government as it is one of the major administrative activities of the country requiring the requisitioning of the officers and other ranks all over the country for a short period. The Registrar General and ex-officio Census Commissioner for the 1961 Census was appointed in July 1958. The Superintendent of Census Operations in all the States and Union Territories were appointed in April 1959. The officers at the district and lower levels were appointed subsequently.

The census operations for the 1961 Census started with the Conference of representatives of the various Central Ministries, State Governments and non-governmental users soon after the appointment of the Census Commissioner. Considering the fact that the timing of the 1961 Census was to coincide with the completion of the Second Five Year Plan and keeping the requirements of the users in mind, the first draft of the 1961 Census schedule was prepared and first pre-test was made during February-March 1959 with the help of the Directors of Statistical Organisations in the States. Based on the experience of the first pre-test certain modifications were made and a second draft was prepared which was again put to trial in the field with the help of the Superintendents of Census Operations and the normal administrative staff in the various States. After these two pre-tests the 1961 Census schedules were finalised at a meeting of the Superintendents of Census Operations in September-October 1959. This Conference prepared the detailed definitions and instructions also for the enumeration of the population.

The Superintendents of Census Operations in the States drew a calendar of operations of the Census which was strictly adhered to in order that the Census could be successfully completed.

The draft tabulation programme for the 1961 Census was prepared in 1959 and was given wide circulation for comments among the users of Census data. In the light of the comments received the tabulation programme was decided in late 1960. The table headings and the sizes of the various tables were discussed further table by table at the Third Conference of Superintendents of Census Operations held in February 1962.

The Plans for census enumeration were finalised well in advance. As mentioned above, the calendar of operations

prepared by the Superintendent of Census Operations laid down every detail in this respect. It laid down the date of appointment of the enumerators, their number being determined on the basis of the work-load for each enumerator which, in turn, was determined on the basis of the two pre-tests of the Census questionnaire. For every four or five enumerators there was a gazetted officer to control the quality of the Census known as Census Charge Officer (usually Tehsildars or Talukdars). Each enumerator who visited the households within his demarcated jurisdiction during the period of enumeration and recorded the answers in the schedules enumerated on an average 750 persons in rural areas and 600 persons in urban areas. There were about a million persons of all categories engaged in the field operations of the 1961 Census.

Sampling has not been used in the enumeration of population at any stage. However, certain data have been tabulated on sample basis for which definite procedure has been laid down.

Though great advances have been achieved in many advanced countries in the matter of data processing with the help of the electronic computers resulting in high speeds and accuracy, the Indian Census has remained traditional in this respect. Hand tabulation has been done in the 1961 Census except for a small part which has been processed on mechanical equipment. Soon after the completion of the field enumeration, the Census individual slips and schedules were despatched to 78 or so tabulation offices spread over the whole country which were established for this purpose.

The '*Sorting and Compilation Instructions*' for processing of the data were decided well in advance. *Sorting and Compilation Instructions* laid down the tally sheets and other processing forms.

Training of the census staff is an essential feature of the Census. The Superintendents of Census Operations of various States trained thoroughly their Deputies and Assistants and the District Census Officers. The District Census Officers trained the Charge Officers and the Circle Supervisors in the main outline of the Census Operations. The intensive training classes of the enumeration staff were organised by the District Census Officers in collaboration with Taluk Officers, Tehsil Officers, Circle Officers and so on. The Superintendent himself during

his tour conducted as many training classes as possible.

There were two courses of training. The first one was for house numbering and house listing, which was done in the early part of 1960. This consisted of oral instructions and practical demonstrations. The second course of instructions to the enumeration staff commenced from October 1960 and continued upto the beginning of the enumeration. A mock Training Sample Census (or rehearsal) was conducted during November 1960 in all the States to give the actual field experience to the enumerators.

The 1961 Census laid down an elaborate programme of publication of Census results. Besides a general report for all-India and for each State and Union Territory, written by the respective Superintendents of Census Operations which gives the main results and the view of the Census Officers, detailed results have been published in numerous volumes and parts. The results of all-India and each State form separate volumes in the series of 1961 Census publications. The publications for each State have been brought out in several parts. Besides these a separate volume has been published for each district in the form of *District Census Handbook*, a feature which was introduced for the first time in 1951. In addition to these publications, a number of census monographs on special studies based on the census data have been released at the all-India level.

In order to give wide publicity to census enumeration i.e. to explain the importance and objectives of the Census to the public and to have best public cooperation in the biggest venture in the country, effective steps were taken from the very beginning. The following three pamphlets were printed and widely circulated.

1. What is a Census and why we should have one.

2. How a Census is taken.

3. Growing Importance of Population Censuses.

The following publicity media were also used for the purpose :

1. Talks and discussions on the radio.

2. Special articles and discussions contributed by various persons to local news-papers.

3. Posters.

4. Special advertisements.

5. Feature films and slides.
6. Special publicity material through National Extension Service block development staff.
7. Use of special postal stamp cancellation seals carrying the message of the census.
8. Radio plays for rural broadcasts and other similar media.

The publicity campaign was intensified as the enumeration period approached nearer.

To evaluate the completeness and accuracy of the Census, a sample verification of the count was carried out after the 1951 census. The sampling fraction was roughly 1 in 1000 and the verification showed a net under-count of 1.1%. In order to have a post enumeration check of the 1961 Census, plans were finalised in advance and a post enumeration census was conducted on a sample basis with the sample fraction of 1 in 1000 in the third week of March 1961. This was done to avoid any bias which might have been introduced due to a large interval between the actual census count and the verification count. The post enumeration check of the 1961 Census indicated a net under count of 0.7%.

The innovations and shortcomings in the 1961 Census

The 1961 Census of population was, in a way, much different from the earlier censuses. Against only one census questionnaire in all the earlier censuses, there were three schedules, viz., houselist, household schedule and the individual slip. In the earlier censuses, the total number of occupied residential houses were counted in the manner prescribed by each Superintendent of Census Operations in his State as he thought best. In the 1961 Census, the Registrar General and the Census Commissioner for India thought it appropriate to prescribe a uniform proforma for houselisting. The houselisting operations were carried out at different periods in different States between April and October 1960 and synchronised with the house numbering operations which were required to indicate the location code for the main census operations. Besides recording the number of census houses in the 'Houselist' schedule, information was recorded on purpose for which census house was used, e.g., dwelling, shop, shop-cum-dwelling, business, factory, workshop, school or other institu-

tion, jail, hostel, hotel or lying vacant etc., the predominant material of the roof and the wall, the number of households living in a Census house together with the number of male and female members and the number of rooms in census household. The tenure status of the household living in the Census house, whether own or rented was also recorded. In case a census house was used as an establishment, workshop or factory, details were recorded regarding the name of the establishment or proprietor, name of product(s), repair or service undertaken average number of persons employed daily last week and the kind of fuel or power used were also recorded. This was done in order to give a detailed frame of industrial establishments for the first time for the country as a whole. The information based on the houselist has been published under the *Housing & Establishment Report and Tables*—Part IV of the publication programme.

The introduction of a household schedule was another innovation of the 1961 Census. This schedule has two parts—Part I relates to agricultural holding of the household and to the household industry carried out by the household, if any, and part II is meant for 'Census population record' which gives name, sex, relation to head, age, marital status, and description of work in the case of worker and was to be compiled from the individual slips relating to the members of the household. The basic purpose of having the Census population record was to serve as a national register of citizens if bound in volumes and available for use as a frame of all households, but this could not be achieved since no attempt was made by the Census organisation at the Centre or in the States to keep these records properly and make them available for research purposes.

The definition of an urban area was not uniform in the various States in the earlier censuses. Although, according to the definition of urban areas, a place was treated as urban if the population was more than 5,000 yet quite a number of smaller places were considered as urban if they had some definite urban characteristics. On the other hand, many places with population more than 5,000, which were in the form of large sized villages were treated as such. The decision whether to treat a place as urban or rural rested with the Superintendents of Census Operations and therefore the position differed from

State to State. In the 1961 Census, a uniform definition of urban areas based on the following criteria was adopted : All corporations, municipalities and cantonment boards were treated as urban. In other cases a place was treated as urban only if it had a population of not less than 5,000, had a density of 1000 per square mile and had three-fourths of its population in non-agricultural pursuits. In exceptional cases where a place has definite urban characteristics, e.g. a large tourist centre having all urban facilities, etc. the criteria were relaxed in consultation with the Census Commissioner for India. Though introduction of the above definition of urban areas resulted in non-comparability of the Census statistics of such areas in relation to 1951 and earlier censuses, it has placed the concept on a sound footing for the next census.

The 1961 Census has differed from the earlier censuses (1931 to 1951) in respect of the economic characteristics of the population. While the earlier classification was based on the concept of earner or self-supporting persons, earning dependent and non-earning dependent, in the 1961 census the concept of worker was used. This concept is based on the time spent during a specified period on activities meant for pay or profit and does not include those persons who earn their livelihood from pension, rent, etc. However, this definition of worker is neither based on usual status approach nor on labour force approach. In the case of seasonal industries, the definition of worker was very loose and its result was that the number of female workers in seasonal industries shot up considerably in 1961. Also, this change in concept has also resulted in non-comparability of the 1961 Census data with earlier censuses to such an extent that the Government of India has not found it possible to have a comparability of the 1951 and 1961 census economic classifications.

Another feature in the 1961 Census has been to treat all workers at par whatever be their income from work instead of differentiating between self-supporting and earning dependents as in the 1951 Census. The persons who were not at work have been classified by type of activity, viz., full time students; household duties; dependents, infants, or disabled; retired, rentier or having other independent means; beggar, vagrants etc, inmates or institutions; persons seeking employment for the

first time, and unemployed but seeking work. This information has been given by the 1961 Census for the first time and is considered to be quite valuable.

The actual enumeration in the 1961 census was spread over a period of 25 days *i.e.* from the 10th February to 5th March 1961. During the 19 days between February 10 (inclusive) and sunrise of 1st March, the Census enumerator visited all the households under his charge for purposes of enumeration. A revisional round was made between the 1st and the 5th March 1961 in which the enumerator made corrections for any birth or death which occurred between the time he visited a household and the sun-rise of 1st March. He also enumerated that person whom he found in a household as having not been enumerated at another place during the period February 10 to February 28, 1961. In the snow-bound and inaccessible areas of the country, the enumeration was extended over a longer period and was held prior to the main census. The Census of houseless persons in the rural areas and in small towns was undertaken on the night of 28th February, 1961. In big cities and towns where there was reason to believe that they had a large houseless population, the census of houseless persons was conducted over a period of more than one night. These cities were divided into well marked sectors and special enumerators were appointed for the purpose.

It may be mentioned here that several of the 1961 Census inquiries made little direct contribution toward the population census whose primary aim is to provide information on personal and familial aspects of human life which are indicators of levels of living. Moreover, the 1961 Census, by including a sort of census on land holdings and a census of industrial establishments, became an omnibus census.

The data on size of land holdings collected in the 1961 Census have been found of limited use because of the dubious nature of these data. Many of the Superintendents of Census Operations have indicated in their reports the type and amount of difficulties their enumerators faced in eliciting this type of information.

In the case of household industry the concept was not clear enough and therefore it led to the classification of certain non-household industrial establishments as belonging to the

household sector and *vice-versa* depending upon the interpretation of the term by the enumerators in the field. The amount of gross and net errors of this type cannot be estimated because of lack of necessary information.

Users of the Census Data

The most important use to which the census population data are put is by the Election Commission for the allocation of seats in the House of the People to the different constituent States, for the division of each State into territorial constituencies and to the readjustment of such representation at the completion of each census. Social and cultural tables are used to fix the representation of members of Scheduled Castes and Scheduled Tribes in the House of the People and the Legislative Assemblies of the States, and in the allotment of these seats to constituencies as laid down in the constitution. Thus the Census of India is used as a primary and important tool of democracy.

With the start of the First Five Year Plan, India entered into an era of development planning and the Planning Commission was established at the Centre to look after this work. For planning purposes census data in all its varied form have been used by authorities at various levels. For example, the population figures distributed by sex and age and with rural-urban break-up help in preparing population projections for future dates. They provide the base figures and also the rates of growth which have prevailed in earlier years. Census information, particularly on economic classification, is used in preparing the national income estimates at the all India and State levels.

The District Census Handbooks which were published for each district for the first time at the 1951 Census give valuable information for each village or census tract, and sometime even for hamlet groups. The District Handbooks as soon as they were published became an invaluable reference not only to Central and State Governments but also to district administrators, departments engaged in planning and development work, legislators, political groups, and private trade and business. To private trade and business the Handbooks provided adequate material for market study and research in the form of information about types of consumers and suppliers, centres of agri-

cultural production, likely nature of consumer propensities, distances to and from main markets and Centres, communication by road and rail, mailing facilities, likely urban development, availability of skills and attitudes, location of various types of industry, availability of industrial raw materials, suitability of sites for locating processing industries.

Another continuous use of the District Census Handbooks has been made by the Ministry of Community Development and its counter-parts in the States. The carving of the entire country into Community Development Projects and National Extension Service Blocks was made possible solely by the publication of Census figures for every village.

The National Sample Survey have used the data contained in the District Census Handbooks continuously to which they provided an excellent rural frame.

Anticipating the needs of the Planning Commission in the matter of perspective as well as current planning, the census schedule for 1961 was modified to cover new ground. The information on housing, and the detailed industrial and economic classification have been found to be of considerable help in improving the national income estimates. The industrial frame at the village/block level provided by the 1961 Census for the first time has helped in carrying out special surveys on cottage and household industries. The 1961 Census has thrown greater light on internal migration than any of the earlier censuses.

Biases in the Census data

Though the Census of India has a long tradition yet the data thrown out at different Censuses are not perfect in all respects. This is perhaps difficult to achieve in such vast operations where about a million persons drawn from different walks of life are put to work simultaneously for a short period. Thus we find a certain amount of under-enumeration in our Censuses. This is true of the censuses of other countries of the world, as well. In the U.S.A. which had the first census in 1790, the under-enumeration in the 1950 census was estimated to be of the order of 2.5% and it is felt in certain quarters that the under-enumeration in the 1960 Census has been of the same order. The post enumeration check of the 1951 Census in India gave net under-

enumeration of 1.1% and the post-enumeration check of the 1961 Census has indicated a net under-enumeration of 0.7%. This has been considered as an excellent improvement over the previous Census but it has to be seen whether we had the real improvement in census taking or whether the method of measuring the under-count needs improvement. It may, however, be added that besides the under-count in all ages, children, especially infants, are more susceptible to under-count since they are quite often missed in the process of enumeration.

The age data are the next thing which need special mention. There is a tendency of heaping the age at 0 or 5 years which prevails in some magnitude all over the world. Even the age data of the advanced countries of the world are not free from this tendency where literacy is almost cent per cent. In India the age-data as obtained in the census cannot be put to use without making adjustments. Techniques have been developed which help us in making the census age data useful. Such figures are known as smoothed age data. The 1961 Census age data have been published in both forms—actual and smoothed.

It may be mentioned that the errors and biases in the census data enter not only at the enumeration stage, but they creep in at the scrutiny and coding stage, sorting and compilation stage and tabulation stage also. Although great advances have been made in some countries to minimise these biases by making use of the electronic computers, but in India hand sorting was used even in the 1961 Census. It is difficult to say anything about the magnitude of such errors in gross and net terms as no estimates are made about them. However, care is taken at each stage to check and verify the results.

Preparations for the 1971 Census

The preparations for evolving the questionnaires, concepts and definitions, and procedures for the 1971 Census were taken in hand by the Office of the Registrar General, India (Ministry of Home Affairs) towards the beginning of 1967. A four-day Seminar on the preparation of the 1971 Census was held in New Delhi in May, 1967 in which representatives of various Ministries of the Central Government, Quasi-government institutions, universities and private bodies, and individual experts participa-

ted for the above purpose. While discussing the scope and coverage for the 1971 Census, the Seminar took the view that comparability with the 1961 Census be maintained to the extent it was possible and some of the most important new inquiries be added so that necessary data could be available at the national and state levels for planning purposes.

The questionnaires evolved after this Seminar required collection of information on land holdings, housing stock, industrial establishments, fertility and family planning including fertility history of ever-married women, alongwith the usual information on age, sex, marital status, working status, etc. The questionnaires were put to field trial in the last quarter of 1967 in all the States in India. Soon after the pretest, the experience of collecting data was discussed in a Conference of the Superintendents of Census Operations in the States at New Delhi in January, 1968.

The Office of the Registrar General, India convened a second Conference of the users of census data and the Superintendents of Census Operations in October 1968 in order to revise the earlier drafts of the questionnaires in the light of the comments received by them from various organisations and individual research scholars and in the light of the experience of the first pretest. The discussions in this Conference led to substantial modifications of the earlier questionnaires, for example, the questions on land holdings were dropped, and the portion on fertility history and housing condition was considerably simplified. The new schedules have been named as:

- (a) Houselisting schedule
with a special schedule for establishments,
- (b) Individual slip.
- (c) Household schedule. This has four parts, viz.,
 - (i) Population record,
 - (ii) Housing condition,
 - (iii) Fertility schedule, and
 - (iv) Family planning schedule.

The questionnaires evolved at this Conference were again tested in the field in the months of March-April, 1969 in all the States and a five day Conference was held in May, 1969 at New Delhi to consider the experience of this pretest for finalizing the Census questionnaires.

Labour Statistics

Introduction

The field of labour statistics is one of the most extensive fields in official statistics. According to the International Labour Office (ILO), statistics of labour cover the following items:—

1. Major economic classifications
 - (a) classification of industries
 - (b) classification of occupations
 - (c) classification by status
2. Labour force, employment, unemployment and under-employment
3. Wages, hours of work and labour income
4. Consumer price indices
5. Family living studies
6. International comparison of real wages
7. Social security
8. Industrial injuries and occupational diseases
9. Industrial disputes
10. Collective agreements
11. Migration¹

These statistics are required to serve as a barometer of the labour conditions prevailing in a country and also the steps taken by the governments and employers towards labour welfare.

The importance of adequate statistics in the labour field is readily acknowledged to day by governments, economic analysts, business and labour leaders and planners. However, the development of the particular items depends upon the specific problems which are crucial to a country and also on its level of

1. International Labour Office, *The International Standardisation of Labour Statistics*, Geneva, 1959, pp. iii-v.

economic and industrial development. Data on the number of people in the labour force, and the occupations in which they are engaged are basic labour statistics from the point of view of economic planning which is the most important aspect of the government policy in India.

History of Labour Statistics in India

Labour statistics may be said to have originated in India when the first national census was taken in 1872. This census gave not only the count of number of persons, but also the number of gainfully employed. Since then every census has thrown useful data on the workers in different industries and occupations every ten years.

Besides the statistics on employment thrown by the Census, other data on labour statistics have developed in India as a result of various labour laws like the Factories Act, Payment of Wages Act, Trade Unions Act, Workmen's Compensation Act etc., which were enacted from time to time. The need for systematic collection of labour statistics was pointed out by the Royal Commission on Labour in 1931. The Commission observed that it was on facts that policy must be built, and so long as there was uncertainty as to the facts there must be confusion and conflict regarding the aim. The Commission recommended the adoption of suitable legislation enabling the competent authority to collect and collate information regarding the living, working and economic conditions of industrial labour. The recommendation was given effect to only in 1942 when the Industrial Statistics Act was passed to facilitate the systematic collection of statistics from Factories relating to welfare and conditions of labour. Industrial development during the Second World War led to the setting up of a statistical branch in the Department of Labour. A separate Directorate to conduct family budget enquiries and construct the cost of living index numbers was also instituted. With effect from 1.10.1946 these two organisations were merged to form the Labour Bureau which was entrusted with the following functions:

- (a) Collection, compilation and publication of labour statistics;
- (b) Maintenance of consumer price index numbers of urban and rural areas;

- (c) Construction of consumer price index numbers for agricultural workers;
- (d) Keeping up to date factual data relating to working conditions of industrial workers collected by Labour Investigation Committees;
- (e) Conducting research into specific problems with a view to furnishing data required for the formulation of labour policy;
- (f) Bringing out pamphlets and brochures on various aspects of labour affairs and labour statistics;
- (g) Publications on labour affairs and labour statistics.

The Directorate General of Employment and Training (DGET), formerly known as Directorate General of Resettlement and Employment, Chief Inspector of Mines and other Central and State Government agencies either employing labour or responsible for administering labour Acts, publish labour statistics as a by-product of administration. In addition, some specific enquiries on various aspects of labour statistics have been specially conducted, either on a regular basis or on an ad hoc basis by the Labour Bureau, D.G.E.T., N.S.S. and other agencies of Central and State Governments.

We shall now discuss the various topics on which labour statistics are collected, compiled and published in India together with brief descriptions of the various publications. Many of the statistics which are published by the Government are by-products of administration of labour laws. The scope of such statistics is therefore limited by the particular labour law under which they are collected. This scope has changed with amendments of the laws from time to time. The geographical coverage of the statistics has also varied from time to time.

We now give below the sources and nature of existing labour statistics starting with statistics of labour force.

Labour Force

The total of the gainfully employed and the unemployed constitute the labour force. This gives an estimate of those persons who are in the employment market. The estimate of labour force is usually made with reference to the population in the working age groups, usually 15—59 years. Reliable estimates of labour force at any point of time play an important

role in man-power planning. There are two chief sources of information on labour force. They are the population census of 1961 and the National Sample Survey.

Population Census : The broad classification of the population in the 1961 Census was worker, unemployed, and others. In order to define a person as 'worker' the basis of work was satisfied in case of seasonal work like cultivation, livestock, dairying, household industry, etc., if the person had some regular work of more than one hour a day throughout the greater part of the working season. In the case of regular employment in any trade, profession, service, business or commerce, the basis of work was considered to be satisfied if the person was employed during any of the fifteen days preceding the day of enquiry. A person who was working, but was absent from his work during 15 days preceding the day of enumeration due to illness or other causes, was also treated as worker. Work included not only actual work but also effective supervision and direction of work. Persons under training as apprentices with or without stipend or wages were also regarded as working. On this basis, it was reckoned that the number of workers in 1961 was 188.68 millions in India consisting of 162.25 millions in rural areas and 26.43 millions in urban areas. These figures have been taken as bench mark for official purposes.

A person who was not classified as a worker was asked as to whether he was seeking employment and if yes, the person was classified as 'unemployed'. The tabulated data gives the number of unemployed of age 15 and above only. According to the 1961 Population Census, there were 1.36 million unemployed persons in India consisting of 0.57 million in rural areas and 0.79 million in urban areas. As stated earlier the labour force by definition is a measure of the economically active population, that is, those who are currently engaged in production of economic goods and services or those who are capable of, though not currently engaged in gainful activities, and hence is the sum of the number employed and the number unemployed. Thus the estimate of labour force for 1961 was 190.04 millions accounting for 43.3 percent of the population in India. The corresponding percentages for rural and urban areas are 45.2 and 34.5.

National Sample Survey: Another source of information on labour force is the NSS. In the NSS, a variety of concepts and definitions were experimented upon from round to round. However, from the 16th round (covering the period 1960-61) onwards, certain uniformity has been brought about based on the *Standards for Surveys on Labour Force, Employment and Unemployment* issued by the CSO. Data for the 16th round are available from the NSS for both the rural and urban areas. According to the definition used in the NSS, a person was considered to be employed if one had worked on at least one day during the reference period of one week. If a person was not employed during the reference week, it was ascertained by a series of questions as to whether one was looking for work in the case of urban areas and whether seeking employment or available for employment in the case of rural areas ; if yes, the person, was classified as 'unemployed.' It should be noticed here that this definition of worker differs from that adopted in the 1961 Census, particularly in the aspect relating to the reference period. The census is a one time enumeration whereas the NSS survey is staggered equally over a period of a year. Again the approach in the census was first to ascertain the attachment of a person to one or other of the industrial category like cultivator, agricultural labourer, household industrial worker, or workers in other industries and service, while in the case of the NSS the person's labour force status as to whether one is employed or not was determined first and then only the industrial or occupational or employment status particulars were collected. These important variations in the concepts and definitions, approach and method are responsible for the wide differences in the figures of labour force resulting from the 1961 population census and the 16th round of the NSS. As per the results of the 16th round of NSS, the percentage of labour force was 41.9 percent in rural areas and 34.0 percent in urban areas. In the urban areas, the classification of a person as unemployed was restricted to the age-group 15-59 but there was no such age restriction in the case of rural areas. Thus while the figure for urban areas from the NSS is broadly comparable with that of the census, some adjustment to leave out the unemployed outside the age-group 15-59 has to be made. It is also necessary to leave out the unemployed who did not seek

employment but were available for work which brings down the estimate of the percentage of labour force in rural areas from the NSS to 40.9. It would be seen that particularly in the case of rural areas with its predominant un-organised sector, the difference is huge. In the case of urban area, however, the figures from the two sources are fairly close.

TABLE I
Percentage distribution of population by labour force
status according to the 1961 Population Census and the
16th round of the National Sample Survey
(July 1960—June 1961)

Area labour force status	Rural		Urban		All-India	
	Census	NSS	Census	NSS	Census	NSS
1	2	3	4	5	6	7
1. employed	45.06	40.26	33.49	33.19	42.98	39.00
2. unemployed	0.16	1.62*	1.00	0.82	0.31	1.46
3. labour force (1)+(2)	45.22	41.88	34.49	34.01	43.29	40.46
4. outside labour force	54.78	57.77	65.51	65.61	56.71	59.28
5. Not recorded	—	0.35	—	0.38	—	0.36
Total	100.00	100.00	100.00	100.00	100.00	100.00

*This percentage will be only 0.60 if the category of unemployed is restricted to ages 15 & above and persons not seeking work but available for employment are excluded.

Employment

In this section we discuss the statistics of employment under various industrial sectors of the Indian economy.

(a) *Factories:* Statistics relating to employment of labour are for factories covered by the Factories Act, 1948 and relate to all factories employing 10 or more workers and using power, factories employing 20 or more workers and not using power and factories specially brought under the purview of the Act by the State Governments. The statistics relate to persons employed, directly or through any agency, whether for wages or not, in any manufacturing process or in clearing any part of the machinery or premises used for a manufacturing process, or any other kind of work incidental to or connected with, the manufacturing process or the subject of the manufacturing

process. Thus the definition of 'worker' as laid down in the Act, does not cover manual workers alone but some clerical and supervisory personnel as well.

All factories registered under the Factories Act are required to submit statutory returns to the Chief Inspector of Factories in various States. Arrangements exist for the processing and consolidation of the statistics contained in these returns in the Office of the Chief Inspector of Factories which furnish consolidated returns for their respective States to the Labour Bureau for final compilation. The figures presented relate to (i) number of working factories and (ii) estimated average daily employment¹ by States and by industry groups. For factories not submitting returns, the estimated figure of employment is based on the following sources of available information in order of their preference:

- (i) recent factory inspection report;
- (ii) previous year's employment data;
- (iii) employment figure reported in the application for registration and grant of renewal of licence.

The first Factories Act in India was passed in 1881 in order to regulate the working conditions in factories. It contained rudimentary provisions relating to health and safety and was primarily designed to protect children. The Act was revised in 1891, 1911, 1922 and 1934 which extended the provisions of the Act and also covered various items of labour welfare. As a result of ratification of the revised ILO Convention relating to night work of women and young persons, the Factories Act of 1948 was amended in 1954. The main provisions of the Act relate to health, safety and welfare, employment of young persons and women, hours of work, annual leave with wages, occupational diseases, powers of inspectors and penalties for offences.² These statistics are published regularly in the following publications:

- (i) Indian Labour Statistics
- (ii) Indian Labour Journal

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1. The figures of average daily employment are obtained by dividing the total man-days worked during a year by the total number of working days during the year.
 2. For details of the salient features of these provisions of the Act, see Labour Bureau's '*The Indian Labour Year Book*', 1953, pp. 205-208.

(iii) Annual Survey of Industries

(iv) Statistical Abstract of the Indian Union.

(b) *Mines*: The Chief Inspector of Mines collects information regarding the number of persons employed and other matters relating to Mines and Quarries (except those specially exempted by Central Government) covering wage earners, salaried employees, foremen and apprentices. The statistics or 'average daily number of persons employed' by sex are published in the '*Annual Report on the Working of the Mines Act*'. The statistics relate only to mines covered by the Mines Act 1952 and as amended in 1959, and do not take account of small mines and surface diggings. The statistics generally relate to units furnishing their annual returns. Cases of non-response are followed up by reminders, warnings and cancellation of railway wagon allotments and as such the degree of non-response is reported to be small.

(c) *Railways and Posts & Telegraphs*: For Railways, the data show the total number of persons (including gazetted officers, officers of similar rank and subordinate staff) employed as on 31st March of each year in open line and construction on all Indian Railways and in the office of the Railway Board and other subordinate offices. The data, therefore, reflect the physical number of persons in employment on a particular date and are not based on average attendances. The figures of employment in Posts and Telegraphs are obtained from the Director General, Posts and Telegraphs and relate to non-gazetted staff in different branches of the Posts and Telegraphs Departments as on 31st March each year.

(d) *Employment in the Public Sector*: The figures of employment under the Central Government (civilian staff only), State Governments, quasi-governments and local bodies are regularly collected by the Directorate General of Employment and Training for the last day of each quarter.

(e) *Plantations*: Annual statistics relating to average daily employment in tea, coffee and rubber plantations are supplied by the Directorate of Economics and Statistics, Ministry of Food and Agriculture, Government of India. The respective data are now maintained by the various Boards like the Tea Board, the Coffee Board and the Rubber Board.

Besides the figures of employment relating to the sectors

described above, the employment figures published by the official agencies also cover the sectors of shops and commercial establishments, and ports. In the Annual returns under the Shops and Commercial Establishments Act and Weekly Holidays Act, all the States (except U.P.) furnish data on employment in the areas covered by the respective Acts. The Acts are applicable to only selected urban areas of individual States. However, even for the areas covered by the Acts, adequate arrangements for collection of correct employment data are not uniformly satisfactory in all the States. The figures of total employment in ports by port authorities like Port Trusts or Port Commissioners, Stevedores, Coaling firms, Owners of Barges and lighters, ship repairing and painting firms etc. in the major ports are published by the Labour Bureau.

From the above description it can be clearly seen that different nomenclatures have been adopted in obtaining employment figures for different sectors. Moreover, there are various limitations of coverage in the case of each sector. Further these do not cover the whole of the agricultural sector, the cottage and household industries sector, construction sector, commerce, transport (excluding railways), and services etc.

Employment Statistics from the Census :

The decennial population census is, in fact, the main source of information for statistics of employment. The concepts, definitions and classification adopted have been changing from one census to another. However, the census provides data on working population and on its distribution by industry and by occupation at the stall and lower level. The 1961 Census of Population has given information on the gainfully employed persons classified into nine major categories, namely, cultivators; agricultural labourers ; persons engaged in mining, quarrying, livestock, factory, fishing, hunting, plantations, orchards and allied activities; household industry; manufacturing other than household industry ; construction ; trade and commerce ; transport, storage and communications ; and services.

Another source of information on employment is the National Sample Survey. According to the 1961 Census, the percentage of employed to population in rural areas was 45.1 while

according to the NSS, the corresponding figure was 40.3. The divergence in these two could be traced to the percentage of employed in agriculture and that too to the category other than 'employees'. Probably the main difference is due to varying counts of 'unpaid family workers' in the census and the NSS. For the urban areas, the percentage of employed was reckoned at 33.5 in the census and 33.2 in the NSS which are fairly close.

TABLE 2
Percentage* distribution of employed population by
broad industry and employment status

Industry and employ- ment status	Rural		Urban		All-India	
	C	N	C	N	C	N
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Agriculture</i>						
employees	9.04	8.81	1.43	1.74	7.67	7.54
Others	28.27	24.28	2.64	3.76	23.66	20.59
<i>Non-agriculture</i>						
employees	2.35	3.36	17.04	15.85	4.99	5.61
Others	5.40	3.81	12.38	11.84	6.56	5.26
<i>Agriculture + non-agriculture</i>						
employees	11.39	12.17	18.47	17.59	12.66	13.15
Others	33.67	28.09	15.02	15.60	30.32	25.85
Total	45.06	40.26	33.49	33.19	42.98	39.00

*percentage to respective population such as rural, urban and all-India.

C—Population Census, 1961.

N—NSS 16th round (July 1960-June 1961).

Unemployment Statistics

While there are three important sources of unemployment statistics, there is no reliable and continuous series available on a regular basis. The first source of unemployment statistics is the Employment Exchanges with a network of nearly 350 exchanges, mostly located in urban areas of the country. The Employment Exchange statistics contain figures relating to the number of persons seeking work at the end of each month, their classification in broad occupational groups, number of applicants placed in employment, number of vacancies notified and number of persons trained in various Centres. These are pub-

lished every month by the Directorate of Employment Exchanges. However, these figures cannot be taken to reflect the size of urban unemployment in the country as such because of several limitations of the statistics of Employment Exchanges. First, although the existing employment exchanges cover all the major towns in India, yet they do not cover the whole of urban India. Secondly, there are registrants from the rural areas and their position in total registrants is not known. Thirdly, a large proportion of registrants are employed and they keep their names on the live registers in order to improve their prospects. Fourthly, all the unemployed persons do not register themselves with the employment exchanges. It should be pointed out here that in order to make the Employment Exchange statistics on live registers of some use in interpreting the current level of urban unemployment in the country, it is necessary to obtain the estimates of various correction factors.¹ This is important owing to the fact that this is the only series of unemployment data available on a current basis and that too on the district level. In their present form, however, the statistics of Employment Exchanges cannot be taken to reflect the trend in urban unemployment.

The other two sources of unemployment statistics are the National Sample Survey and the Population Census. So far as the latter source is concerned, information on unemployment was first collected in the 1961 Census of Population. The census being a gigantic operation, perhaps not much reliance could be placed on the unemployment data obtained from the Census except that this information could serve as a broad check. Regarding the NSS, there is considerable time-lag in making the information available, especially at the state level. Further, from 17th round (1961-62) onwards the NSS gives information only in respect of urban areas, though it is possible to build up some estimates for the rural areas too from the information collected as a part of the integrated schedule of the NSS.

It may also be mentioned here that the NSS covers the household population while the Census covers all individuals.

1. A worth mentioning study in this connection is :

Krishnan, T.N., 'Unemployment in India—Estimates based on Employment Exchange Statistics' *Artha Vijnana*, Vol. I, No. 2, pp. 157-67.

Although it is difficult to judge as to which concept gives more accurate estimate of total unemployed persons in the country, the estimates given by the NSS are more in vogue due to their being of a serial nature.

The percentage of unemployed to population in rural areas was 1.62 according to the NSS while according to the 1961 Census it was 0.16. Even after leaving out the unemployed below 14 years and also excluding those who are not seeking but only available for employment, in order to render it comparable with the definition adopted in the Census, the NSS figure would reduce to 0.60 only. In the case of urban areas where the definition was more or less the same, the percentage of unemployed to population was 0.82 in the NSS while it was 1.00 in the Census. Inspite of the differences in the concepts particularly with respect to the reference period and duration of the survey, the figures for the urban area are relatively closer unlike for the rural one. Further, the gap between the estimates of unemployed from the NSS and those based on Employment Exchanges data is very large.

Statistics of Underemployment

A study of employment and unemployment in a country like India is incomplete without having some idea of the underemployment situation. Unfortunately, there is hardly any information available on underemployment. Some information to measure visible underemployment, i.e., that which involve, shorter than normal periods of work and which is characteristic of persons involuntarily working part-time, is collected in the Labour Force Surveys of the National Sample Survey.¹ Two approaches are adopted for the purpose. The first one is on the basis of the quantum of work in terms of the number of days or hours worked during the reference week. The second one is on the basis of particulars regarding availability

I. According to the standard definition adopted in the labour force surveys of the NSS, a person who has worked for howsoever short a period during the reference week is treated as 'employed' and a person to be classified as unemployed should not have had any work during the reference week. Thus the principle underlying this criterion is that an underemployed person is basically an employed person, however, inadequate the quantum of employment may be.

for additional work.

(a) *Rural underemployment*: Information for rural areas is available latest for the 16th round of NSS covering the period from July 1960 to June 1961.

TABLE 3

**Percentage distribution of workers by weekly hours at work
and availability for additional work—Rural areas (1960-61)**

<i>Weekly hours at work</i>	<i>percentage of working persons</i>	<i>cumulative percentage</i>	<i>percentage reporting available for addi- tional work</i>	<i>Col. 4 x col. 2 100</i>
(1)	(2)	(3)	(4)	(5)
0	0.67	0.67	4.69	0.03
1-14	4.72	5.39	35.40	1.67
15-28	12.30	17.69	24.42	3.00
29-42	20.59	38.28	17.15	3.53
43-56	33.48	71.76	5.78	1.93
57 and above	27.44	99.20	1.79	0.49
not recorded	0.80	100.00	—	—
Total	100.00	100.00	10.71	10.71

Source : NSS report No. 114 (16th round : Rural Employment and Unemployment survey)

It will be seen that nearly 18 percent of the workers in rural areas worked less than 28 hours per week or 4 hours per day, i.e. those who worked for less than half the normally expected duration of time and perhaps this would give a measure of the underemployment. Since the norm of hours of work differs from one occupation to another, an alternative measure of underemployment could be to find out the percentage of employed persons, who are available for additional work, irrespective of the hours worked, a measure of which may be placed at about 11 per cent. If this latter measure is taken, the number of underemployed may be placed at about 1.6 crores in 1961. If further, we treat persons who have worked for less than 28 hours during the reference week and are available for additional work as 'severely underemployed', the estimate of the number of such persons would be about 70 lakhs.

The concepts of unemployment and underemployment in respect of rural areas pose many problems of measurement. Because of this, canvassing of a separate schedule on rural employment and unemployment has been suspended after the 17th round (1961-62) in the National Sample Survey.

(b) *Urban underemployment*: As regards urban areas, data on the number of hours worked or number of hours additionally available for work was not collected in the 16th round. For the 17th round (1961-62), this information is available and besides, the percentage distribution of workers by number of days worked is also available for this round. Information is available on hours worked and hours available for additional work for the 18th round. The class intervals used in the 18th round for hours worked or hours available for additional work are not, however, the same as in the 17th round and also the classification in the 18th round is not clear. In view of this, Tables 4 & 5 give an analysis of underemployment in urban areas based on the 17th round only.

TABLE 4

Cumulative percentage of employed persons at work by number of days worked—Urban areas (1961-62)

Number of days worked during reference week	1	2	3	4	5	6	7	Total	
	1	2	3	4	5	6	7	8	9
percentage of employ- ed persons at work	0.82	2.33	4.44	7.25	10.47	40.07	97.59	100.00	

Source—17th round : Urban Labour Force Survey.

If we treat persons working less than 3 days in a week as underemployed, then about 4.4 per cent of the employed persons were underemployed in 1961-62. If we go by the number of hours worked and treat persons working less than 28 hours during the reference week as underemployed, then 9.1 per cent of the employed persons were underemployed or if we go by the number of persons who are available for additional work, irrespective of the total number of hours worked by them, then the percentage of underemployed among employed persons

TABLE 5
Percentage distribution of workers and availability for
additional work—Urban areas (1961-62)

<i>Weekly hours at work</i>	<i>% of working persons</i>	<i>cumulative percentage</i>	<i>percentage reporting available for additional work</i>	<i>Col. 4 x Col. 2 / 100</i>
1	2	3	4	5
1-7	0.56	0.56	41.42	0.23
8-14	2.22	2.78	27.51	0.61
15-28	6.29	9.07	36.70	2.31
29-42	14.39	23.46	19.60	2.82
43-56	54.37	77.83	0.58	0.32
57 and above	18.49	96.32	0.03	0.01
Not recorded	3.68	100.00	0.80	0.03
Total	100.00	100.00	6.33	6.33

Source : NSS draft report No. 151 (17th round—Urban Labour Force Survey).

would be 6.3. But if we treat those who worked less than 28 hours during the reference week and were available for additional work as 'severely underemployed', the percentage of the severely underemployed would be 3.1. Thus perhaps going by the concept of availability for additional work, the number of underemployed in urban areas might be placed at 16 lakhs of which 8 lakhs were 'severely underemployed' during 1961-62.

Employment Exchanges and Training Centres

(a) *Employment Exchange (EE).* The Employment Exchange Service was originally set up in India in 1945 for resettlement of ex-service personnel and it was only in April 1948, that the EE service was thrown open to all categories of employment seekers. The cessation of Mobile Exchange activity and non-participation of Employment Exchanges at the labour assembly points in April 1953 introduced an element of heterogeneity in the statistical series. Since May 1953, however, the data thrown by the Employment Exchanges is of a uniform nature except that the number of Employment Exchanges in the country has increased manyfold since then.

(b) *Employment Market Information (EMI)*: A scheme for collection of information on employment trends in different areas, industries and occupations was introduced during the Second Five Year Plan with a view to providing a basis for planning manpower programmes including manpower development, utilisation and training. Under this scheme a pilot study was conducted in Delhi in December 1955 with the help of an I.L.O. Expert. Data were collected about vacancies outstanding, number of persons seeking work, shortage of personnel, occupational details of employees, separately in the public and private sector. The scheme was extended to cover the entire public sector in 1958 and to selected districts (Employment Market Areas) for private sector.

Under this scheme studies are conducted at quarterly intervals which provide data on the trend and condition of employment and unemployment, the relationship between the demand for and supply of workers, the industrial and occupational distribution of the labour force and the type of workers found in short supply.

Currently employment market information is collected on a statutory basis from all establishments in the entire public sector, and non-agricultural private sector employing 25 or more workers, at quarterly intervals for the whole country. Further, under this programme, non-agricultural private establishments employing 10 to 24 persons are also covered in 316 out of 326 districts. These quarterly data are available at district level by industries. Details on occupation and anticipated future requirements of manpower are also collected once in two years. Data are also collected under the EMI programme once in two years covering the private sector, non-agricultural establishments employing 5-9 workers. It is estimated that the EMI covers about 50% of the total number of employees in the organised sector outside agriculture. Collection of data in respect of agriculture and construction has not been regular.

Wages and Earnings

The question of wages and earnings is very important in the context of the economic development of the country and for a proper appraisal of the economic position of various social groups within the country. If we consider unemploy-

ment or under-employment as an index of economic distress among the people of working age, the quantum of wages and earnings serve as an indicator of the economic prosperity of that section of the population which is in paid employment. If greater employment means ability of a larger number of persons to satisfy their wants, increased individual real earnings imply greater satisfaction of his wants.

Valuable data on wages in India were first published in *Prices and Wages in India* issued by the Department of Commercial Intelligence and Statistics. The publication was, however, suspended in 1923. Presently, the statistics on wages are collected under the Payment of Wages Act, 1936 and the Minimum Wages Act, 1948.

Because of the importance of wages and earnings, the Government of India set up in 1948 the Fair Wages Committee consisting of representatives of employees, employers and the Government to determine the principles on which fair wage should be based, and the lines on which those principles should be applied. The Committee recommended that the actual wage should be between the lower limit *i.e.* minimum wage and the upper limit of the Industry's capacity to pay depending on (*i*) the productivity of labour (*ii*) the prevailing rates of wages, (*iii*) the level of national income and its distribution, and (*iv*) the place of the industry in the economy of the country.

The Minimum Wages Act, 1948 requires the appropriate Government, Central or State as the case may be, to fix minimum rates of wages payable to employees (defined as persons employed for hire or reward to do any work, skilled or unskilled, manual or clerical etc.) in an employment in scheduled industries, *viz.* woollen carpet making or shawl weaving establishments ; rice flour or *dal* mills ; tobacco manufactories, including *bidi* making ; plantations ; oil mills ; local authority, construction or maintenance of roads or building operations ; stone breaking or stone crushing ; lac manufactories ; mica works ; public motor transport ; tanneries and leather manufactories ; and agriculture, and in an employment added to these subsequently. The Act provides for the fixation of (a) a minimum time-rate of wages (b) a minimum piece-rate of wages, (c) a guaranteed time-rate of wages and (d) an overtime rate of wages, for the different occupations, localities or class of work and for

adults, adolescents, children and apprentices. The Act also provides for the revision of minimum wages from time to time.

The I.L.O conducts an enquiry in October of each year to have data on hourly wages and normal hours of work of adult wage earners in 41 occupations. The inquiry is known as 'October Inquiry' and the results are published every year in the *Year Book of Labour Statistics* and in the Statistical Supplement to the *International Labour Review* (generally in July issue).

The Labour Bureau has been collecting data relating to wages and earnings under the following heads :

(1) Manufacturing industries, (2) Mines, (3) Plantations, (4) Transport, (5) Central Government employees and (6) Employments covered under the Minimum Wages Act, 1948.

The data available through established system of collection are discussed below, under respective heads.

Manufacturing Industries

Statistics of average per capita annual earning of persons employed in factories are available on the basis of data received under the Payment of Wages Act, 1936 from various States and Union Territories. Under this Act, Authorities in each State collect annual returns from individual factories as defined in clause (m) of Section 2 of the Factories Act, 1948, (*i.e.* factories employing 10 or more workers and using power and factories employing 20 or more workers and not using power) and furnish these returns to the Labour Bureau after consolidation. These consolidated returns are finally processed in the Labour Bureau for compiling the all India statistics of earnings.

The Payment of Wages Act, 1936, applied till 1957 to employees in factories covered by the Act, earning less than Rs. 200 per month. In 1958, the Act was amended to bring within its scope persons earning Rs. 200 or more but less than Rs. 400 per month also. The statistics of average per capita annual earnings are published statewise and industry-wise and according to the components of wages *i.e.* gross wages broken into bonus, money value of concessions, basic wages, cash allowances, and arrears, separately for employees earning less than Rs. 200 per month and less Rs. 400 per month. From 1965, onwards it has been decided to call for the returns only one wage group *i.e.* for persons earning less than Rs. 400

per month.

The figures of average per capita annual earnings are obtained by dividing the total progress wage bill for an industry by the corresponding average daily employment. The figures derived in this manner are subject to variation on account of variation in the number of working days. Because of this, figures are published for perennial industries only for which variation in the number of working days is not likely to be appreciable.

While interpreting the results, it should be borne in mind that the data collected under the Payment of Wages Act are subject to a number of limitations regarding scope, coverage and concepts used.

The employees covered under the Payment of Wages Act are not the same as workers defined under the Factories Act since there is an upper limit of the total monthly earnings in the present case.

The term 'Wages' as defined in the Payment of Wages Act, 1936 (as amended) includes all remuneration capable of being expressed in terms of money which would be payable in terms of the contract of employment *i.e.* (1) basic wages, (2) cash allowance which includes production or incentive bonus, efficiency bonus, dearness and other allowances, (3) money value of concessions, (4) annual profit bonus, and (5) arrears. The term excludes the following :

- (a) value of house accommodation, supply of light, water etc.,
- (b) contribution by the employer to any pension fund or provident fund,
- (c) travelling allowance or value of any travelling concession,
- (d) any sum paid to defray special expenses, and
- (e) any gratuity payable on discharge, unless payable under any law, contract or instrument which does not provide for the time with which payment is to be made.

It is not possible to say how far returns have been based on a uniform interpretation of the term 'remuneration'. It is quite likely that uniform practice is not followed by all the reporting units in furnishing data for the component 'money

value of concessions'.

All the factories coming under the purview of the Payment of Wages Act do not submit the primary returns to the State Authorities, although they have statutory obligation for doing this.

The time lag in the publication of the figures of annual earnings is about a year. The figures relating to wages and earnings are published in the '*Indian Labour Statistics*'.

Indices of money and real earnings : The Labour Bureau has been compiling a series of *index of money earnings of factory workers* for all India, individual States and broad groups of industries on the basis of data obtained under the Payment of Wages Act, 1936. The series were first compiled with 1939 as base. The base year was, later on, revised to 1951. The index of money earnings for States is a weighted arithmetic average of the ratio of current earnings to the base period earnings, the weights being the base period wage bills in the respective industries within the State. The State indices are weighted in proportion to the base period total wage bills in the respective industries within the State. The indices of real earnings are obtained by deflating the indices of money earnings on base $1951=100$ by All India Consumer Price Index Number on base $1951=100$.

Mines

Serial statistics of earnings of employees in mines are collected and compiled by the Director General of Mines Safety. For coal mines, the statistics relate to *average per capita weekly earnings* and are available on monthly basis. The monthly returns on coal mines give average daily attendance, total wages and other payments made in cash for work done for the first complete working week of the month. The total payments are broken up as basic wages, dearness allowance, and other cash payments, and taken prior to deductions, if any. The per capita weekly cash earnings are then computed by dividing the total payments by the average daily employment during the week.

In case of mines other than coal mines, upto 1960 the statistics of earnings related to *average daily earnings in December* and were available on an annual basis. Since 1961, the data on earnings relate to the complete year and not to December

alone. Statutory annual returns showing the average daily employment and total earnings with their break-up etc., are collected by the Director General of Mines Safety. The average per capita daily earnings are computed by dividing the total payments for December by the corresponding aggregate daily attendance.

Based on these statistics, the Director General of Mines Safety compiles different series of "Index Numbers of Money Earnings"¹ for workers employed in different mining industries with base December 1951=100. No account is taken of real earnings in this case as is done in the case of manufacturing industries.

Plantations

The statistics of average per capita monthly cash earnings of settled labour relating to Plantation workers in Assam separately for men, women and children are published by the Controller of Emigrant Labour in the Annual Reports on the Working of the Tea Districts Emigrant Labour Act, 1932. For the purposes of these statistics, a 'labourer' is defined as a person working on wages not exceeding fifty rupees (Rs. 50.00) per month and excludes a clerk, domestic servant, mechanic, carpenter, mason, brick layer or other artisans. The figures are based on data supplied by tea estates submitting returns. The coverage is, therefore, incomplete and varies from year to year. The figures in respect of the years 1953-54 are based on two months average (March and September), whereas those for 1953-54 and later years are average of the twelve months of the respective years.

Transport

(i) *Railways* : The statistics of average annual earnings of staff employed in Government Railways are published in the *Annual Report of the Railway Board*, and include pay, allowances, passages, provident fund contributions, gratuities, pen-

$$I = \frac{\sum (n_0 e_i)}{\sum (n_0 e_0)} \times 100.$$

Where n_0 represents the average daily employment in 1951, e_i and e_0 the average per capita earnings during the current and base periods, respectively.

sionary benefits and grainshop concessions. The figures relate only to Class III and Class IV employees (both permanent and temporary). The average annual earnings are obtained by dividing total remuneration by the average number of staff employed.

(ii) *Docks* : The statistics of monthly earnings of workers employed are available in the Annual Reports of the Bombay and Madras Dock Labour Boards. Some statistics on earnings of Dock labour are also available for Calcutta, Vishakhapatnam, Cochin, Kandhla and Mormugao ports.

(iii) *Motor Transport* : No serial data on earnings of employees in this industry are available. It may, however, be mentioned that public Motor Transport is covered under the Minimum Wages Act, 1948 and various State Governments have fixed minimum rates of wages for employees in this sector under the Act. Some *ad-hoc* surveys were also conducted by the Labour Bureau for nationalised sector and were published in Labour Year Book in 1957.

Earnings of Central Government Employees (Distribution by pay ranges)

Data on salaries of Central Government employees and also State Government employees have been published in the Central Pay Commission's reports and State Pay Commissions/ Committees reports. The Census Reports of Central Government Employees conducted by the C.S.O. for 1951 and 1953 to 1959 and by the D.G.E.&T. since 1960 provide data in respect of number of employees on the basis of basic pay ranges. Similar data (in some cases on total emoluments) have been collected by most of the State Governments but on an *ad-hoc* basis.

Minimum Wages

With a view to fixing minimum rates of wages and regulating the conditions of work of the workers employed in the unorganised and sweated industries, the Minimum Wages Act, 1948 was enacted. As mentioned earlier, the Act required the appropriate Government, Central or State as the case may be, to fix minimum rates of wages payable to employees (defined as persons employed for hire or reward to do any work, skilled or unskilled, manual or clerical) employed in the Scheduled

Employment.¹ Under the provisions of this Act, the appropriate Governments have fixed minimum rates of wages for workers employed in scheduled employments. Minimum rates of wages fixed/revised under the Act by the Central and State Governments for the lowest paid unskilled male workers employed in the Scheduled employments originally included in the Act are published in the *Indian Labour Year Book*. Minimum rates of wages fixed/revised for similar category of workers in the new employments (added to the schedule subsequently) are published in the *Indian Labour Statistics*.

Agriculture

Comprehensive data on agricultural wages are available in the Agricultural Labour Enquiry Reports. Further data in respect of total wages (both in cash and in kind) are also collected by the State Governments through diverse agencies in selected villages. This relates to most commonly current wages of skilled labour (carpenter, blacksmith, and cobbler), field labour, other agricultural labour, and herdsman, and are collected every month. However, this does not provide an overall picture either at the all-India level or at the State level.

From the above discussion it would be seen that although data on wages and earnings are available for different types of labour employed in different industries, the concepts and definitions employed are not uniform and do not lend themselves either for pooling to give an overall picture or for comparison among various industries. As a matter of fact, these data are collected only under the statutory requirements without having any idea of uniformity. This is a serious limitation of these data.

Hours of Work

Estimates of man-hours of labour input are needed for use in analysing labour costs, productivity etc. They are also needed to regulate hours of work of different categories of workers to provide compulsory rest intervals and overtime wages. According to the ILO, the statistics on hours of work

1. Minimum rates of wages need not be fixed in respect of any employment in a State, if it comprises less than 1000 employees.

are needed to show (i) the general level of hours of work, (ii) hours of work in major divisions of economic activity (*i.e.* manufacturing, mining and quarrying, construction and transport, storage and communication) and (iii) average hours worked in specified manufacturing industries.

The Tenth International Conference of Labour Statisticians held in Geneva in 1962 in adopting the resolution on hours of work stated that these statistics should be developed in accordance with the specific needs of each country in the light of its social and economic structure and in accordance with international standards, in order to promote comparability among countries. The Conference took note of the fact that in terms of scope and comparability, the data on hours of work reported to the ILO were the least satisfactory of all the statistics published by them in the *Yearbook*. X.2 N 685 : 9

In India, the hours of work are regulated for workers engaged in organised sectors under various Acts; *viz.* (1) The Factories Act, 1948, (2) The Mines Act, 1952, (3) The Plantations Labour Act, 1951, (4) The Indian Railways Act, 1890, (5) Dock Workers (Regulation of Employment) Act, 1948, (6) State Acts relating to workers in shops and commercial Establishments, (7) The Apprentices Act, 1961. Practically all these Acts specify the daily and weekly hours of work, rest intervals, the maximum hours of overtime in a day and in a week and weekly off, etc. The statistics of total manhours worked during the year in each industry are published in the *Annual Survey of Industries*. For the unorganised sector no data on hours of actual work are available except from the NSS where data are collected in the household surveys on hours worked and hours available for work in respect of gainfully employed persons for broad occupational groups.

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Family Living Studies and Consumer Price Index Numbers

'Family budget surveys' are specialised surveys in which the bulk of the data collected relate to consumption patterns and consumption expenditure. They usually provide detailed data on consumer expenditure for commodities and services needed for the construction or revision of consumer price indices. The details supplied by such surveys on consumer purchases, together with estimates of the value of items acquired

without monetary payment, are also useful in the computation of national accounts. They provide the basis for comparisons of consumption levels at different periods and between different population groups.

The Rau's Court of Enquiry constituted in 1941 to investigate into a dispute regarding dearness allowance on the G.I.P. Railway under the Trade Disputes Act 1929, recommended that Central Government should take up the responsibility of maintaining up to date cost of living index numbers. In 1943, the Government of India initiated family budget enquiries on uniform lines in a number of centres all over the country and subsequently organised construction of cost of living index numbers on the basis of the new surveys. By 1953, there were in all 55 individual series being compiled in the country, out of which 17 were compiled by the Labour Bureau. Most of the indices related to working classes, a few to plantation workers and the rest to industrial workers employed in organised industries.

In the Second Five Year Plan, the need for constructing new series of consumer price index numbers on a uniform basis and based on latest consumption patterns was stressed. It was, therefore, decided to conduct fresh family living surveys among working class at 50 important factory, mining and plantation Centres in India. 32 Centres were allocated to factories, 8 to mines and 10 to plantations. Care was taken to give due representation to all the major States in case of factories and to mines, like coal, iron, mica, manganese and gold. In case of plantation, tea, coffee and rubber plantations were duly represented. These surveys were conducted during 1958-59 under the technical guidance of the Technical Advisory Committee on Cost of Living Index Numbers set up by the Government of India. These surveys were designed to first providing weighting diagrams for construction of consumer price index numbers for working class for individual centres and all-India. On the basis of the results of these surveys new series of consumer price index numbers for industrial workers on base $1960=100$ have been compiled and published for a number of centres. Besides collecting data on income, expenditure and consumption for deriving the weighting diagrams for the index numbers, data have also been collected on other items like demographic parti-

culars, education and skill, working conditions, awareness of rights under labour laws, trade union, social security benefits, employment history with special reference to forced idleness, housing conditions, and situation of the house in the context of social amenities, family welfare, recreation and other habits and savings and assets in order to provide data on a whole complex of circumstances affecting the well-being of the workers and their families.

Since the 'Family living surveys' were to be conducted for the construction of weighting diagrams for consumer price index numbers for industrial workers, only manual workers employed in registered factories, mines, and plantations were covered. Further, only such families which derived 50% or more of their income from manual labour in registered factories, mines and plantations were covered in the survey. The survey was conducted on a sampling basis after preparing frame of all such families in the selected centres. The survey covered 23,400 families in 50 Centres.

Besides the family budget enquiries conducted by the Labour Bureau, certain States have also conducted family budget enquiries for working class. This has helped in extending the number of centres for which consumer price indices have been prepared.

Middle Class Family Living Surveys: The need for an all-India middle class cost of living index has been felt on several occasions in connection with the fixation and adjustment of the emoluments of Central Government employees. The Technical Advisory Committee on Cost of Living Index Numbers set up by the Ministry of Labour and Employment recommended in 1954 that family budget enquiries should be conducted to cover, among others, urban middle class population. In 1957, the Wage Board for Working Journalists mentioned in its report that it was greatly handicapped in its work by the absence of cost of living index numbers applicable to middle class and recommended that as disputes concerning wages and salaries of middle class employees were on the increase, Government should take the necessary steps to compile and publish reliable middle class cost of living index numbers. The Government of India, therefore, decided in November 1957 to carry out an urban middle class family living survey (a) to facilitate

construction of middle class cost of living indices and (b) to ascertain the conditions and levels of living of middle class families and placed the overall responsibility for the survey on the Central Statistical Organisation.

The survey, first of its kind on a national scale, was conducted in 1958-59. It covered nearly 36,000 middle class families in 45 selected cities and towns and yielded valuable information on the various aspects of the conditions and levels of living of the urban middle class.

The term 'middle class' generally denotes a not too homogeneous section of the population made up chiefly of white collar workers in Government, salaried employees of mercantile, industrial and financial establishments, small industrialists and traders, professionals and other intellectual workers with moderate incomes. The features they have in common are the educational standards, disinclination towards manual work, modes of living and pattern of family life. As a working basis, for the purpose of this survey, a middle class family was defined as a family which derived 50 per cent or more of its income during the reference month from the earnings of its members who were gainfully occupied as employees in non-manual work in the non-agricultural sector. A family was defined for the purpose of the survey as consisting of persons (a) generally related by blood, marriage or adoption, (b) usually living together and/or being served from the same kitchen, and (c) pooling a major part of their income and/or depending on a common pool of income for a major part of their expenditure.

The survey, besides collecting information on the family income and other receipts and family expenditure on consumption, savings and investments, covered the following items, as well :

- (a) Demographic particulars and sickness ;
- (b) Education and training ;
- (c) Employment and unemployment ;
- (d) Conditions of work, trade union participation and social security ;
- (e) Housing conditions ;
- (f) Recreation ;
- (g) Family welfare ;
- (h) Savings and assets ;

- (i) Indebtedness ; and,
- (j) Possession of luxury goods.

The data collected in the above survey has been analysed in great detail and utilised in the construction of consumer price index numbers for urban non-manual employees for each of the 45 centres and for all-India.

Agricultural Labour Enquiry (A.L.E.): Barring a few regional studies, no attempt was made in India in the first half of the 20th century to have facts on the living conditions of the rural proletariat although the rural population constituted nearly 85 per cent of the total Indian Population. It was only in 1950-51 that the first all-India Agricultural Labour Enquiry was conducted by the Government of India with the object of finding facts about the living and working conditions of the agricultural labour. This was followed by second A.L.E. in 1956-57 through the N.S.S. A rural labour enquiry was planned on a comprehensive scale for 1961-62. However, on account of national emergency, its scope was restricted to survey of income, consumption and expenditure of rural labour households. The field enquiry was integrated with the 18th round of the (1963-64) of the N.S.S.

Agricultural Labour Enquiry (A.L.E.) 1950-51: In the first A.L.E., data were collected on employment, earnings, cost and level of living and indebtedness of agricultural labour with a view to consider what ameliorative measures, including fixation of minimum wages should be undertaken to improve their conditions. The survey covered all the then 27 States of the Indian Union and was conducted in three stages, viz. (i) general village survey, (ii) general family survey, and (iii) intensive family survey in about 800 fixed set of villages selected on the basis of stratified random sampling. General family survey covered about one lakh rural families and the intensive family survey about 11,000 agricultural labour households. In the intensive family survey households were interviewed every month for a period of 12 months.

The first stage of enquiry was confined to collection of data on conditions of sample village, system of land tenure, land utilisation, wholesale and retail prices of selected commodities of consumption and prevailing wage rates. In general family survey data pertaining to agriculture, composition, size

and earning strength (of main and subsidiary occupations of all families living in the sample village), size of cultivators holdings, live-stock and implements and housing were collected. In the final stage of enquiry data on employment in different agricultural operations and non-agricultural labour, unemployment, wages, income, consumption expenditure and indebtedness of a sample of agricultural labour families were collected each month for a period of one year.

On the basis of the 'weights' thrown up by the enquiry the Labour Bureau has been compiling from August 1956 onwards, Consumer Price Index Numbers for agricultural labour for all States of Indian Union with base 1950-51=100. The current data on retail prices of selected items of consumption are supplied by the Directorate of National Sample Survey. With effect from July 1960, the Directorate of N.S.S. have been collecting these data every month from a fixed set of 422 sample villages.

Second Agricultural Labour Enquiry : A second all-India Agricultural Labour Enquiry was conducted in 1956-57 with a view to have broad assessment of the impact of development schemes undertaken during the First Five Year Plan on the conditions of agricultural labour. The enquiry was conducted in about 3600 villages selected on the principle of stratified random sampling staggered evenly over 12 months and covered about 28,560 agricultural labour households. The survey was conducted by the Directorate of NSS in its 11th and 12th rounds and, the Indian Statistical Institute, Calcutta provided the design and schedules etc. The data were analysed by the Institute and reports have been published by the Government of India.

The 'weighting diagrams' thrown up by this enquiry are used in the computation of the new series of consumer price index numbers for agricultural labour with base 1960-61=100¹.

Comparability of the results of two A.L.E.s. : The concepts and definitions involved in the two ALEs and the design of the survey have differed to some extent and have thus rendered the comparability of the results difficult. In the first ALE an agricultural labour was one who was employed for wages in the process of crop production and agriculture labour family

1. See also *Indian Labour Journal*, November 1964

was one in which either head of the family or 50 per cent or more earners reported agricultural labour as their main occupation and main occupation was in turn one where one was engaged for 50 or more days in agricultural work during the preceding year. In the second ALE, the definition of agricultural labourer was extended to cover all agricultural occupations like dairy farming, horticulture, live-stock raising, bee-keeping and poultry. The agricultural labour family was defined as one which derived major income from agricultural wages. Besides, wages paid in kind were evaluated in second ALE on wholesale prices as against retail prices in first ALE. The households in the first ALE were fixed whereas they changed every month in the second ALE.

During the first ALE employment data were collected only for those adult male workers who reported wage employment in each month. Workers not reporting wage employment were assumed to be self-employed for half period. Wage employment for half the day or more was counted on full day's occupation and less than half day was ignored. Self-employment data were obtained as a residual of employment and unemployment. As such employment data for first ALE were an over-estimate. In the second ALE number of days spent in different pursuits were recorded under suitable intensities of day's labour. The number of days worked was calculated after assigning proper weightage to part employment. Data on unemployment were obtained after deducting for wage employment and self-employment from 365 days. As such employment was under-estimated and unemployment over-estimated in the second ALE as compared to the first.

Rural Labour Enquiry : With a view to broadly assessing the impact of development schemes undertaken during the first and the second Five Year Plans on the conditions of the agricultural labour, an advisory committee was set up to advise on planning and conducting of the Third ALE during the Third Plan period. The Committee comprised of the representatives of the Planning Commission, Ministry of Food and Agriculture, C.S.O., N.S.S., I.S.I., Ministry of Labour and Employment and the Labour Bureau. This Committee recommended that the scope of the Third ALE be enlarged in order to collect information on all rural labour households instead of only agricultural labour households, and the enquiry be named as Rural Labour Enquiry (RLE).

However, in view of the National Emergency, the Ministry of Labour and Employment in consultation with the Planning Commission decided to curtail the scope of the RLE and to restrict it to collection of data on expenditure and income of rural labour households (including agricultural labour households). The field enquiry was integrated with the 18th round (1963-64) of the NSS. The survey covered 8742 villages covering the whole of the Indian Union.

Consumer Price Index Numbers

From the above description of the family living studies, it can be clearly seen that practically all of them were designed to obtain the consumer expenditure pattern for the base year for the selected groups of population. The family living studies thus provided the weighting diagrams for building up the consumer price index numbers.

In India consumer price index numbers are published regularly for (i) working class for all-India and also for various centres, (ii) industrial workers in industry, mining and plantation towns, (iii) agricultural labourers and (iv) plantation workers for Tripura Territory.

All India Working Class Consumer Price Index : The Labour Bureau is compiling an interim series of all-India average working class consumer price index numbers with base $1949 = 100$. It is obtained as a weighted average of working class consumer price indices of 27 centres out of which indices for 15 centres are compiled by the Labour Bureau and rest by the State Governments. The 27 centres were not selected on any consideration in respect of an all-India index, but were merely those for which series of consumer price index numbers happened to exist.

Consumer Price Index Number for Industrial Workers : The consumer price index numbers for industrial workers based on the results of fresh family living surveys conducted during 1958-59 are published for 46 centres out of the 50 centres in which the surveys were conducted. The base period for all these series is the calendar year 1960. The weighting diagrams for each series is based on an average expenditure pattern of families of industrial workers (including single member families) at the Centres.

Consumer Price Index Number for Agricultural Labourers : The Minimum Wages Act, 1948 applicable *inter alia* to employment in agriculture, required fixation as well as revision of minimum wages in accordance with the movement of cost of living index numbers for agricultural labourers. The first Agricultural Labour Enquiry provided the weighting diagram for constructing the original series of consumer price index numbers for all-India and for each of the States with the year 1950-51 as base.

The Second ALE has given a new weighting diagram for constructing the revised series of consumer price index numbers for agricultural labour with the agricultural year 1960-61 as base.

Consumer Price Index for Plantation Workers in Tripura Territory : The index number is published monthwise beginning January 1962 with the base period as the calendar year 1961. The weighting diagram is based on an average expenditure pattern of families of Tripura Plantation Workers provided by a Family Budget survey conducted, at the request of the Tripura Administration, amongst them during December 1959-December 1960 by the Labour Bureau.

Uses of Consumer Price Indices : Most countries have established consumer price indices primarily for the purpose of measuring changes in the purchasing power of wages and salaries, that is, to compute indices of real earnings. They are also used to show differences in trends in the retail prices paid by the working class in different centres. At government level, these are used in determining general economic policies particularly with respect to wages, prices, and taxation. In addition consumer price index numbers act as a useful guide for wage fixation and wage agreement by Industrial Tribunals and Wage Boards. In India, collective bargaining agreements on wages provide for changes in the dearness allowance according to a rise or fall in the consumer price index by a given number of points in the average for a period of preceding 12 months.

Social Security

(a) *The Workmen's Compensation Act, 1923 :* Under this Act compensation is payable to workers employed in scheduled (prescribed) employments and drawing upto Rs 500 p.m. for injuries due to accidents resulting in death or disablement for more than 3 days provided that it is not caused through the

fault of the worker himself. As all the injuries are not compensated, the number of compensated injuries do not reflect the total number of injuries occurring.¹ Data on number of compensated injuries and amount of compensation paid, classified according to the injury resulting in death, permanent disablement and temporary disablement, are published annually in the *Indian Labour Statistics* by the Labour Bureau for the railways, post and telegraphs, C.P.W.D., factories, plantations, mines, docks and ports, tramways, building and construction and municipalities etc.

(b) *The Maternity Benefit Acts* : The data relating to (i) average number of women employed, (ii) number of women who claimed maternity benefit, (iii) number of women who are paid maternity benefit and (iv) total amount paid based on the annual returns for factories, plantations and the mines are published by the Labour Bureau in the *Indian Labour Statistics*. These data are collected on an annual basis under the Maternity Benefit Acts of the various State Governments.

(c) *The Employees' State Insurance Act 1948* : This Act applies to all factories, other than seasonal factories, run with power and employing 20 or more persons. The benefits provided under the Act are : (1) sickness benefit, (2) maternity benefit, (3) disablement benefit, (4) dependent's benefit, and (5) medical benefit. An insured person who is entitled to benefits under the scheme is not eligible to claim similar benefits under the Workmen's Compensation Act or the State Maternity Benefits Acts. Data on the number of persons who took the benefit and the amount of cash and other benefits are published separately for the above items in the *Indian Labour Statistics* on an annual basis.

(d) *Employees Provident Fund Act, 1952* : Data on number of factories establishmennts covered, number of subscribers and the amount of provident fund contributions collected from unexempted factories or establishments are collected annually under this Act and are published in the *Indian Labour Statistics*. Details are also published for each industry and for each State.

1. Many establishments covered by the Act fail to submit returns and thus the information received by the State authorities is incomplete.

Industrial Injuries and Occupational Diseases

(a) *Industrial Injuries* : Annual statistics on injuries based on the number of persons killed or disabled in industrial or work accidents in factories, mines, railways, docks and ports are collected under the Factories Act, Mines Act, Indian Railways Act and Indian Dock Labourers' Act, respectively. The number of injuries is taken as the number of persons receiving injuries. The statistics of injuries published in the *Indian Labour Journal* and the *Indian Labour Statistics* do not represent the actual number of accidents, except in the case of mines, where the figures of actual number of accidents are also available. The figures are published separately for fatal and non-fatal injuries together with the frequency rate per one lakh man days worked for each state and for the major industries. The figures of industrial injuries by causes and as fatal and non-fatal are published annually in the *Indian Labour Statistics*.

(b) *Occupational Diseases* : The available information regarding the incidence of occupational diseases in India is not much. This is particularly so in the absence of proper arrangements for diagnosis of such cases. The only source of data in this regard are returns and reports received in the Labour Bureau on the working of the Workmen's Compensation Act, 1923 and the Factories Act, 1948 and reports, enquiries, and investigations conducted by the State Governments, public institutions etc. Presently, the figures of occupational diseases are included with those relating to industrial injuries.

Industrial Disputes

The statistics of industrial disputes resulting in work-stoppages of both the types, namely, 'strikes' and 'lockouts', are published by the Labour Bureau. A temporary stoppage of work by a group or all employees to express a grievance or enforce a demand or temporary withholding of work from a group of employees by an employer (or a group of employers) in a unit, in connection with matters relating to employment or terms of employment or conditions of employment is termed as an industrial dispute (work-stoppage). Thus both the types of work-stoppages—popularly known as 'strikes' and 'lockouts'—are covered. The statistics *inter alia* do not cover political strikes or sympathetic demonstrations and the like as they are

not connected with any specific demand of employees and closures not connected with industrial disputes sponsored by the employers for reasons like shortage of raw-material, breakdown of machinery, supply of power or financial reasons. For practical considerations, the figures include only those work-stoppages which involve 10 or more workers whether directly or indirectly.

Serial statistics relating to work stoppages from industrial disputes involving 10 or more workers are available from 1921. The statistics collected include the number of disputes, the maximum number of workers involved, number of mandays lost, the number of disputes by causes and results, and percentage distribution of disputes by duration. The disputes are classified according to causes as (a) wages and allowances, (b) bonus, (c) personnel and retrenchment, (d) leave and hours of work and (e) others. The results of the strikes and lockouts are classified as successful, partially successful, unsuccessful and indefinite. These statistics are published in the *Indian Labour Statistics* and the *Indian Labour Year Book*.

The figures relating to industrial disputes are compiled from the statistics collected by the State Labour Departments and Regional Labour Commissioners (Central). The required information is collected by them on a voluntary basis on uniform lines usually from the Units concerned. The maximum number of workers involved directly or indirectly on any one day of the work stoppage is given as the figure of workers involved. The number of man-days lost represents the cumulative total of man-shifts not worked by the employees who were involved in the work stoppage at one time or the other during the potential working days for the whole duration of the work stoppage excluding Sundays and holidays.

Upto 1956, the data related to the States of Assam, Bihar, Bombay, Madhya Pradesh, Madras (split up into Andhra and Madras from 1963), Orissa, Punjab, Uttar Pradesh, West Bengal, Ajmer and Delhi. From the year 1957, the statistics relate to the whole of the Indian Union. The industrial classification of these statistics was changed once in 1950, then in 1955 and again in 1959.

The figures of man-days lost is taken as an indicator for comparing the extent of unrest either amongst States or amongst industry-groups since this figure represents both the number of

workers involved and the duration of work stoppage. The indicator 'severity rate of industrial disputes' which is the ratio of man-days lost to the corresponding man-days available for work is a better indicator for purposes of comparison than the absolute number of man-days lost, but as information on total man-days worked during the year is available for manufacturing industries only, it is not possible to compute severity rate in all sectors.

Statistics of Absenteeism and Labour Turnover

(a) *Absenteeism*: There is not much information available on absenteeism in India. Absenteeism is measured by the percentage of manshifts lost due to absence to the corresponding total manshifts scheduled to work. Generally, absences on account of authorised leave are included whereas absences due to strikes and lockouts are excluded. Such statistics for selected industries, viz. cotton mill industry, woollen industry, engineering industry, leather industry, mining (coal and gold only) and plantations, at important centres are maintained and published by the Labour Bureau in the *Indian Labour Statistics*. These figures are also maintained by some of the State Governments and the Director General of Mines Safety. The yearly figures are obtained by taking simple average of the monthly rates of absenteeism for the 12 months of the year.

The definitions and methods followed presently by the different agencies are not uniform. Apart from the statistics which are collected statutorily from all coal mines covered by the Mines Act, the other series of statistics of absenteeism are collected only on a voluntary basis and are furnished by a few selected large units. In case of non-response, the concern is ignored and the absenteeism rate is calculated from the available returns. This sometimes causes spurious variations in the trends of absenteeism rate.

(b) *Labour Turnover*: Labour turnover measures the extent to which old employees leave and new employees enter into services of the units in a given period. Thus, it covers both the aspects, namely, the proportion of workers who go out of employment (separation) and the proportion of workers who enter into employment (accession) in a given period of time. The rates are computed as per 100 workers per month.

Serial statistics relating to labour turnover are presently available only in respect of cotton textile industry in the States of Gujarat and Maharashtra, and are published in the *Indian Labour Statistics*. The statistics relate to all employees excluding clerks but including the large force of *badlies* employed in the industry to meet the high percentage of absenteeism among the permanent workers.

Trade Unions

The trade union activities in India started in the early twenties when the effects of World War I caused steady rise in the cost of living while the wages lagged behind. The need for trade union legislation was felt when, in 1921, the High Court of Madras granted an injunction restraining the Madras Textile Labour Union from interfering with the business of the Buckingham and Carnatic Mills. The Indian Trade Unions Act was passed in 1926 which conferred legal and corporate status on registered trade unions. The Act provides immunity from Civil and Criminal Liability to Trade Union executives and members for *bonafide* trade union activities. The Act applies to the entire Indian Union, except Jammu & Kashmir, which has its own Act viz. the Jammu & Kashmir Trade Unions Act, 1950.

The trade unions in India are of two types : (1) those formed by employees and known as 'Workers' Unions', and (2) those formed by employers and known as 'Employers' Unions'.

Under the Indian Trade Unions Act, 1926, registered trade unions are required to submit annual returns relating to their membership by sex, assets and liabilities, income and expenditure etc. to the concerned State Governments who, in turn, furnish the same in consolidated form to the Government of India.¹ The data thus collected annually along with a brief note on the working of the Indian Trade Unions Act, 1926 are published by the Labour Bureau in the form of a brochure entitled '*Trade Unions in India*'. The annual statistics of number of trade unions registered, number of unions submitting

1. Upto the year 1964-65, the returns were received on financial year basis and from the year 1965, the returns are being submitted on calendar year basis.

returns, membership of the unions submitting returns, etc. are also published for all-India, by States, and by industries separately for workers' unions and employers' unions in the *Indian Labour Statistics*, *Indian Labour Journal* and the *Indian Labour Year Book*. These publications also give the figures of total income and expenditure of the trade unions separately for the workers unions, and the employers' unions.

Although it is statutory on the registered trade unions to submit annual returns to the concerned State Governments, some of the registered unions either fail to submit their returns as required under the Act or submit defective returns to the State Authorities. Such unions are not included in the published figures. Also no data are available in respect of unregistered trade unions in the country. From the serial statistics available for registered trade unions for recent years it is noticed that only about a half to two-thirds of them submit their returns. Thus it is difficult to say as to how far the published data reveal a true picture of trade unions in the country.

The industrial classification according to which information is collected was revised in 1954-55. A further revision of the industrial classification was undertaken in 1957-58. The enlarged industrial classification is being followed from 1960-61 onwards.

Major Economic Classifications—Classification of Industries, Occupations and Status

To have detailed information of the labour situation in a country it is imperative to classify each worker according to his place of work and according to the type of work performed. The first of these is known as the industrial classification of the worker and the second is known as the occupational classification. When the workers are classified according to whether they are employers, employees or independent workers, they are known to be classified by status.

One of the most important uses of the industrial classification of the working force is that it gives an idea of the distribution of workers in various industries, such as agriculture, mining, manufacturing, construction, transport and com-

munications, trade and commerce and services. This also helps in measuring the shift in the working force from one industry to another. The Industrial Classification is of great help in computing the national income for those sectors of economy where we do not have the estimates of production, but measure the same on the basis of total workers and their average annual earnings.

Classification of Industries

The question of the classification of industry of each worker was taken up at the international level at the first International Conference of Labour Statisticians held in 1923. This Conference emphasized the distinction between classification by industry and by occupation. It also pointed out that for purposes of classifying the labour force the primary classification should be by industry and drew up a list of main divisions of economic activity : primary production (agriculture and mining), secondary production (manufacturing and construction) and services (transport, commerce and administration etc.). The question was further considered at the second and third International Conferences of Labour Statisticians but it was only in 1948 that the classification of industries was finalised. This classification known as '*International Standard Industrial Classification (ISIC) of all Economic Activities*' was revised in 1958 in the light of the experience gained during the preceding decade.

Although data on occupation or industry of each worker have been collected in India right from the first census of population in 1872, there was no definite system for the classification of workers. In the census of 1872, a record was made for each individual of his occupation which continued till the 1931 Census. In the later Censuses, the question was changed into 'means of livelihood', while in the 1961 population census, a record was made of the actual nature of work and the nature of industry so as to enable the classification of a worker both by industry and by occupation. The classification of workers adopted in India in the census of population prior to the 1961 Census is known as the Indian Census Economic Classification (I.C.E.C.) which is considered to be a combination of both industrial and occupational classifications.

Classification of Occupations

Together with the question of classification of industries, the First International Conference of Labour Statisticians considered the desirability and possibility of an international standard classification of occupations but did not make any concrete recommendations regarding the groupings of occupations. The subject was revived only after the Second World War and was placed on the agenda of the Seventh International Conference of Labour Statisticians in 1949. But it was only in 1957 at the Ninth Conference that a detailed classification of occupations into major divisions, groups and sub-groups was accepted. The final text of the International Standard Classification of Occupations, together with definitions of the major, minor and unit groups drafted in consultation with the various member-governments, was published by the ILO in 1958.

During the Fifties when the International Labour Office was actively engaged in finalising the classification of occupations and considering some revisions in its industrial classification, the various official agencies felt the need of having a classification of industries and another of occupations which could suit Indian conditions. In doing so, they were basically guided by the International classification at the division and major group levels. A classification of industries known as the 'Standard Industrial Classification' was prepared by the Directorate General of Employment and Training (earlier known as Directorate General of Resettlement and Employment). They also prepared a 'National Standard Classification of Occupations', which gives a classification of occupations at three digital level and at lower levels also. The definitions of the various occupations have also been published by them. For use in the National Sample Survey, the Indian Statistical Institute, Calcutta, developed another set of industrial and occupational classification which they have been using till now. The Central Statistical Organisation also developed a classification of industries and another of occupation with the object that the same may be adopted at the national level. The Industrial Classification of the CSO is a detailed one and goes even upto 4 and 5 digits. Since all these classifications of industries and occupations are of the same nature, they differ only slightly in minor details. In 1961 Census of Population, the classification of

industries and occupations as prepared by the DGET has been used for classifying workers by their respective industry and occupation. It is under the active consideration of the Government of India to have only one uniform classification of industries which could be adopted for all purposes within the country.

Classification by Status

While considering the statistics of employment, unemployment and the labour force, it has been considered necessary to classify the workers according to their industrial status groups. The Sixth International Conference of Labour Statisticians (1947) have suggested the following classification :

- (1) workers for public or private employers,
- (2) employers ;
- (3) workers who work on their own account without employees ; and
- (4) unpaid family workers.

Although no specific question was asked as to the class of worker in the 1951 Census, it classified the self-supporting non-agricultural workers according to their status as employers, self-employed persons other than employers, employees, and non-agricultural rentiers, pensioners and miscellaneous income receivers. This was done on the basis of the information received to the question on principal means of livelihood of self-supporting Persons. The 1961 Census excluded rentiers, pensioners etc. who were not actively engaged in any productive work from the labour force. The other workers have been classified according to the following four categories :

- (1) employers ;
- (2) employees ;
- (3) independent workers ; and
- (4) unpaid family workers.

Thus it would be seen that the labour statistics in India are fairly developed and attempts are being made to peg the loopholes which still remain. However, no reliable data are yet available on the under-employed population in the country. As a matter of fact, even the definitions of the various terms and concepts involved in the measurement of under-employment have not been formulated properly.

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Agricultural Statistics

Agriculture plays a predominant role in the Indian economy¹ and the need for a comprehensive and reliable system of agricultural statistics² cannot be overemphasised. In this chapter, we review the present position of agricultural statistics in India. We also endeavour to indicate some improvements which are necessary in the field of agricultural statistics.

After giving brief historical background to official statistics of agriculture in India, we consider the various agricultural statistics under the following main headings: (i) agriculture, (ii) forestry, (iii) animal husbandry and (iv) fishery. Finally, the construction of index of agricultural production is described.

Historical background

The primary agricultural statistics, namely, those relating to land utilisation and area and production of crops are almost continuously available from 1884 onwards, although the geographical coverage and their scope have been gradually expanding. Before 1943, there were no returns in respect of the non-reporting states and even in case of the reporting states there existed small pockets for which no returns were received.³ Further prior to this period, the land utilisation statistics were available only for 69% of the total geographical area of the Indian Union. The reliability of these statistics varied from one state to another, especially the statistics of acreage were

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1. Nearly 50 per cent of India's national income originates from agriculture.
 2. Broadly speaking, 'a system of agricultural statistics include quantitative information on all items directly or indirectly connected with production, distribution and utilisation of agricultural commodities including livestock and fisheries.' (1)
 3. For example, in case of lands held under *Jagir* and other forms of privileged tenure.

known to be unreliable in the permanently settled states, being based on the statements given by the village headman or *chowkidar*. The statistics of land utilisation further suffered from inadequate classification and also from the absence of uniform definitions of the items among different states, thus rendering even the available data non-comparable. The statistics of production were available for only ten crops, through forecasts issued periodically during the crop season, while pre-harvest estimates of production were available for a few more crops. The situation of agricultural statistics other than those of area and production was even worse. There was very little data on prices. The quinquennial livestock censuses collected information only in respect of the total number of livestock and poultry. The data on forest statistics were collected only in respect of state-owned forests in the former British India. Data on fisheries were not collected at all.

In 1944, a section of Economics and Statistics was established in the Ministry of Food and Agriculture for bringing about improvements in agriculture through administrative action. This section which developed into the Directorate of Economics and Statistics gave considerable impetus to improvements in agricultural statistics. The Directorate is responsible for the collection, compilation and publication of all agricultural statistics in India. It functions as the central agency for co-ordination, consolidation and publication of these statistics furnished by the state governments.¹ The data, which cover fields of agriculture, fisheries, livestock and forests, are collected from state governments on prescribed forms. The Directorate also collects agro-economic data and advises the Government of India on matters relating to agro-economic policy.

Agriculture

The primary agricultural statistics relating to land utilisation, area and production are at present published in the annual publications, *Indian Agricultural Statistics* (Volumes I

1. Estimates when revised (fully) are published by the States in their respective annual, '*Season and Crop Reports*'.

and II) and *Estimates of Area and Production of Principal Crops in India*, both published by the Directorate of Economics and Statistics (DESAg) with a time lag of nearly four years. The coverage of these statistics is fairly extensive. A large part of the non-reporting area is accounted for by the state of Jammu and Kashmir and the hill tracts of the North East Frontier Agency and Manipur.

In this section we describe the current position first in regard to the statistics of land utilisation and then those relating to area and production.

Land Utilisation Statistics

Land utilisation statistics which mainly give areas of land put to different uses are almost continuously available since 1884. These statistics are fairly reliable in the temporarily settled areas where the village revenue agency collects data through complete field to field enumeration and maintains them regularly as part of land records. In the permanently settled areas, on the other hand, there is no such arrangement and consequently the position in regard to the availability and reliability of the data has not been quite satisfactory. Over the past few years, several steps were taken to improve the situation. These were the adoption of sample surveys by the states of West Bengal, Kerala and Orissa for estimating the crop area and, the introduction of complete enumeration in the state of Bihar. It would be necessary to extend complete enumeration to these states and to the extent feasible to the few non-reporting areas also.¹

The Directorate of Economics and Statistics publishes the statistics of land utilisation (LUS) in their annual, *Indian Agricultural Statistics*, Volume I (summary tables) and Volume II (detailed tables).²

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1. On the recommendation of the *Working Group on Agricultural Statistics* (1), the states of Orissa and Kerala have included the scheme—Institution of Complete Area Enumeration—in the State Annual Plans for 1967-68 and 1966-67, respectively.
 2. Earlier this was published by the Department of Commercial Intelligence and Statistics under the title *Agricultural Statistics of India*. From 1939-40, there have been changes in the title and contents of the publications. Table 1 shows the link between the present and the past issues.

TABLE 1

<i>Year</i>	<i>Title</i>	<i>Scope</i>
1. 1938-39	Agricultural Statistics of India, Vol. I.	Indian Provinces (undivided India), State-wise and district-wise details.
	Agricultural Statistics of India, Vol. II.	Indian States (erstwhile princely States of undivided India), State-wise and district-wise details.
2. 1939-40 to 1942-43	Indian Agricultural Statistics, Vol. I.	Indian Provinces (undivided India) State-wise and district-wise details.
	Indian Agricultural Statistics, Vol. II.	Indian States (erstwhile princely States of undivided India), State-wise and district-wise details.
3. 1943-44 to 1946-47	Indian Agricultural Statistics, Vol. I.	Indian Union Provinces, Centrally Administered Areas and States merged with former Provinces—according to their set-up on 1st September, 1949—State-wise and district-wise details.
	Indian Agricultural Statistics, Vol. II.	States and Union of States according to their set-up as on 1st September, 1949—State-wise and district-wise details.
4. 1947-48 & 1948-49	Indian Agricultural Statistics, Vol. II.	Indian Union—State-wise and district-wise details according to the latest set-up.
5. 1949-50	Indian Agricultural Statistics, Vol. II.	Indian Union—State-wise and district-wise details according to the latest set-up.
6. 1950-51 & 1951-52	Indian Agricultural Statistics, Vol. II.	Indian Union—State-wise and district-wise details according to the latest set-up.
7. 1952-53 & 1953-54	Indian Agricultural Statistics, Vol. II.	Indian Union—State-wise and district-wise details according to the latest set-up.
8. 1954-55 & 1955-56	Indian Agricultural Statistics, Vol. II.	Indian Union—State-wise and district-wise details according to the latest set-up.

For the purpose of reporting the statistics of land utilisation, the geographical area in the country has been divided broadly into four categories. At present, the statistics of land utilisation are available for (i) 2504.3 lakh hectares on the basis of field to field enumeration by the *patwari* or village officials, (ii) 158.4 lakh hectares on the basis of sample surveys, (iii) 326.5 lakh hectares from *ad hoc* surveys and, (iv) 270.1 lakh hectares as completely non-reporting. In Jammu & Kashmir State agricultural statistics are reported for 48.7 lakh hectares only out of a total geographical area of 222.8 lakh hectares. Excluding the State of Jammu & Kashmir, the non-reporting area in the country has been placed roughly at 96 lakh hectares.

The *Indian Agricultural Statistics* also contains information on (i) classification of area reported according to various uses, (ii) area under different forms of irrigation, (iii) distribution of gross area sown according to various crops and, (iv) net area sown, etc.

The total geographical area which was classified into five heads upto 1949-50 was re-classified as per details given in Table 2. This was done mainly in view of the fact that the earlier classification was not satisfactory as it gave only a broad outline of land utilisation in the country and did not give a clear picture of the actual area under different categories of land-use so necessary for agricultural planning.

TABLE 2

<i>Old Classification</i>	<i>New Classification</i>	<i>Definition</i>
(i) Forests	(i) Forests	These include all actually forested areas or lands classed or administered as forests under any legal enactment dealing with forests whether State-owned or private. If any portion of such land is not actually wooded but put to some agricultural use, that portion is included under the

<i>Old Classification</i>	<i>New Classification</i>	<i>Definition</i>
'		appropriate heading of cultivated or uncultivated land.
'		
(ii) Area not available for cultivation	(ii) Land put to non-agricultural uses.	This stands for all lands occupied by buildings, roads and railways or under water, e.g., rivers and canals and other lands put to uses other than agricultural.
	(iii) Barren and unculturable land.	This covers all barren and unculturable land like mountains, desert, etc. Land which cannot be brought under cultivation unless at a high cost, is classed as unculturable, whether such land is in isolated blocks or within cultivated holdings.
(iii) Other uncultivated land excluding current fallows.	(iv) Permanent pastures and other grazing lands.	These cover all grazing lands, whether they are permanent pastures and meadows or not. Village common and grazing lands within forest areas are included under this head.
	(v) Miscellaneous tree crops and groves not included in the net area sown.	Under this class is included all cultivable land which is not included under net area sown but is put to some agricultural use. Lands under casurina trees, thatching grass, bamboo bushes and other groves for fuel, etc. which are not included under 'orchards' are classed under this category.
	(vi) Culturable waste.	These include all lands available for cultivation whether not taken up for cultivation or taken up for cultivation once but not

<i>Old Classification</i>	<i>New Classification</i>	<i>Definition</i>
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(iv) Current fallows	(vii) Current fallows	cultivated during the current year and last five years or more in succession. Such lands may be either fallow or covered with shrubs and jungles which are not put to any use. They may be assessed or not assessed and may lie in isolated blocks or within cultivated holdings.
(viii) Other fallow land.		This class comprises cropped areas which are kept fallow during the current year. If any seeding area is not cropped again the same year, it is also treated as current fallow.
(v) Net area sown	(ix) Net area sown.	This includes all lands which were taken up for cultivation but are temporarily out of cultivation for a period of not less than one year and not more than five years. The reason for keeping such lands fallow may be one of the following: (1) poverty of cultivators, (2) inadequate supply of water, (3) malarial climate, (4) silting of canals and rivers, (5) soil erosion and (6) un-remunerative nature of farming.
		This consists of net area sown with crops and orchards, area sown more than once being counted only once.

The area of land irrigated is classified both according to the sources of irrigation and according to the crops irrigated. The sources separately enumerated are government

private canals, tanks, wells and other sources. The total area irrigated from these different sources represents the net irrigated area. If two or more crops are irrigated in the same year from the same source, the area is counted only once. The total irrigated area under all crops represents the gross irrigated area and includes area under more than one crop during the same year; areas irrigated more than once in a single harvest are counted only once. It is worth pointing out here about the present classification of sources of irrigation which does not afford their categorisation into major, medium and minor. This is so very necessary for realistic planning and watching of progress of irrigation development in the country through the different categories of works.

The classification of crops followed for purposes of presenting the statistics of area under different crops is fairly detailed and consists of two broad groups, (i) food crops which include foodgrains, sugar, condiments and spices, fruits and vegetables including root crops, and other food crops and (ii) non-food crops which include oilseeds, fibres, dyes and tanning materials, drugs and narcotics, plantation, fodder, green manure and other non-foodcrops. The individual crops under each of these two heads are given in Table 3.

TABLE 3

1. *Food Crops*

(a) Foodgrains

(i) Cereals	...	...	...	...	Rice—autumn, winter, summer and total; cholum or Jowar— Kharif, rabi and total; cumbo or bajra, maize, ragi or marua, wheat, barley, other cereals and small millets— Kharif, rabi and total; total cereals and millets.
(ii) Pulses	...	...	...	...	Gram, tur or arhar, other pulses—kharif, rabi and total; total pulses.

TOTAL FOODGRAINS

(b) Sugar	...	...	...	...	Sugarcane, others, total.
(c) Condiments & spices	...	...	...	...	Pepper (black), chillies, ginger, turmeric, cardamoms, betel- nuts, others, total.

				<i>Fruits</i>
(d)	Fruits and vegetables including root crops	...	...	Fresh—Mangoes, citrus, bananas, grapes, prome fruits, others, total; Dried—cashewnuts, others, total;
				Vegetables—potatoes, tapioca, sweet potatoes, onions;
				Others—kharif and rabi, total;
				Total fruits and vegetables;
(e)	Other food crops	...	...
	TOTAL FOOD CROPS	...	...
2.	Non-food Crops			
(a)	Oilseeds	...	...	Groundnut, castor, sesamum (til or jinjili), rape & mustard, linseed, coconut, others, total;
(b)	Fibres	...	...	Cotton, jute, mesta, sann-hemp, others, total;
(c)	Dyes and tanning materials	...	...	Indigo, others, total;
(d)	Drugs and narcotics and plantation crops.			Opium, tobacco, tea, coffee, rubber, cinchona, Indian hemp, others, total;
(e)	Fodder crops	...	...
(f)	Green manure crops	...	...
(g)	Other non-food crops	...	...
	TOTAL NON-FOOD CROPS	...		

While the all India land utilisation statistics are published in the *Indian Agricultural Statistics*, the individual states publish these statistics in the *Season and Crop Reports*. It should, however, be noted that the scope of *Season and Crop Reports* differs from one state to another. The statistics of land utilisation published in the respective *Season and Crop Reports* generally agree with those published in the *Indian Agricultural Statistics*.

The statistics of land utilisation are also published in summary form in the following publications.

- (i) *Abstract of Agricultural Statistics*, India (annual), DESAg.
- (ii) *Indian Agriculture in brief*, DESAg.
- (iii) *Agricultural Situation in India*, (monthly), DESAg.
- (iv) *Statistical Abstract of Indian Union* (annual), C.S.O.

Statistics of Area and Production of Crops

The statistics of area and production are now available for a fairly large number of crops and these are annually published by the Directorate of Economics and Statistics in their "*Estimates of Area and Production of Principal Crops*" (brought out in two volumes—'Summary Tables' and 'Detailed Tables') and by the State Governments in their *Season and Crop Reports*. Besides, the Directorate issues a '*Quinquennial Report on the Average Yield per Acre of Principal Crops*' which contains figures of normal and standard yields fixed for each crop. The periodical crop estimates issued from time to time during the agricultural year are published in the monthly journal of the Directorate of Economics and Statistics (DESAg), '*Agricultural Situation in India*'.

Periodical estimates of area and production of principal crops initially prepared by the concerned state agencies are consolidated by the DESAg and issued on pre-assigned dates in the form of crop estimates. At present, such estimates are prepared in respect of 30 principal crops generally known as forecast crops.¹ Besides these forecast crops, *ad hoc* estimates for certain plantation crops such as tea, coffee and rubber as well as some other non-forecast crops are also published whenever available. The crops, for which these estimates are available, are:

1. Forecast crops

Cereals	Rice, Jowar, bajra, maize, ragi, small millets, wheat and barley.
Pulses	Gram, tur, urid, moong, masur and other pulses.
Oilseeds	Groundnut, sesamum, rapeseed and mustard, linseed and castor seed.
Fibres	Cotton ² , jute, sann-hemp and mesta
Other crops	Sugarcane, potato, black pepper, dry ginger, tobacco, dry chillies and turmeric.

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1. Since the publication of Final Report of the National Income Committee, the additional crops brought under the ambit of reporting as forecast crops are small millets, tur, kharif pulses, rabi pulses, mesta, sannhemp, potato, dry ginger, black pepper, dry chillies, tobacco and turmeric.
 2. Details of area and production by varieties, by trade descriptions and by staple lengths are also given.

2. <i>Plantation crops</i>	Tea, coffee, rubber and coconuts.
3. <i>Minor crops</i>	Bananas, indigo, papaya, sweet potatoes, tapioca, opium, lac, cashewnuts, cardamoms and betelnuts.

Usually two to three estimates are issued in respect of each crop except for cotton for which five estimates are issued. In the case of castorseeds, however, only one estimate is issued. In the case of cotton, in addition to five estimates by the DESAg, an assessment of the actual crop is also made by the Indian Central Cotton Committee (ICCC). These periodic estimates are designed to indicate the main features of a crop at various stages of its growth.¹ The figures of final estimate, however, attempts to provide firm estimates of total area sown and the total production of a crop. These final forecast figures are subject to further revisions depending on the subsequent availability of returns from some of the defaulting areas. Such revisions are generally carried out at the time of the release of final forecast of the next year's crops. Even at this stage it has been found that the returns from the States are sometimes not complete and as such the revisions effected may be only partial and for this reason they are known as 'partially revised estimates'. These 'partially revised estimates' are subsequently revised when complete returns have been obtained from all areas reporting for a crop. The resultant estimate is then known as 'revised estimate'. It may, however, be noted in this context that not all the areas may report for a given forecast crop, though some *ad-hoc* allowances are made for non-reporting areas to ensure complete coverage. The 'final', the 'partially revised' and the 'revised' estimates of area and production are published State-wise for each crop by the DESAg in their annual publication, *Estimates of Area and Production of Principal Crops in India*. The 'revised' estimates are also published by the State governments in their respective *Season and Crop Reports*.

Estimates of outturn of a crop are obtained by multiplying

1. For example, the first estimate, which is generally issued about a month after the commencement of sowing, is intended to give an idea about the area sown under the crops. The second estimate follows about a couple of months later and indicates area including late sowings and conditions of the crop and probable or expected yield in some areas.

the area under it by the estimated average yield per hectare. The former involves (i) cadastral survey of the cultivable area and (ii) annual reports as to the area under each crop from the primary reporting agencies.¹ Information on the latter is based on village records maintained by the State revenue authorities. The average yield rates of most principal food crops and some non-food crops are based on the results of the random sample crop cutting surveys conducted by the respective State Government agencies. Table 4 summarises the position regarding the area and outturn covered by such experiments for different crops pertaining to the years 1960-61 to 1964-65. It may be observed that there are areas where estimates of outturn for even the principal crops are still based on the traditional method of yield estimation.²

Besides the principal crops, there are a number of minor crops, such as banana, tapioca, sweet potato, indigo, opium, arecanut, cashewnut, cardamom and coconut, in respect of which DESAg publishes annually *ad-hoc* estimates of area and production. The estimates of outturn of these crops are relatively less reliable than those relating to the principal crops as the former estimates are not prepared on any objective basis. We now review briefly the position in respect of some minor crops.

2. Fruits and vegetables: Barring a few states, area statistics for individual food crops are not at present available. Yield statistics for them are still less reliable. Production statistics of vegetable crops are also lacking. There is a need for developing a suitable scientific sampling technique to estimate yield rate and total production of fruits and vegetable crops at all-India level as well as at State level for all important fruits and

1. The term 'reporting' differs in the case of land utilisation statistics and periodic estimates. Areas reporting for the former need not necessarily report for the latter and vice versa. This often makes it difficult to resolve the differences between the area figures according to the two sources. For details, the reader is referred to the Final Report of the National Income Committee (paras 2.44 to 2.47).
2. For details of the method of Random Sample crop cutting experiments and traditional method of yield estimation, the reader is referred to *Sample Surveys for the Estimation of Yield of Food Crops, 1944-49*, published by the Indian Council of Agricultural Research, New Delhi, 1951.

TABLE 4

Percentage of Area and Production Covered by Crop-cutting Experiments

Crop	(1)	Percentage to Total Area						Percentage to Total Production					
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		1951 —52	1956 —57	1960 —61	1961 —62	1962 —63	1963 —64	1964 —65	1951 —52	1956 —57	1960 —61	1961 —62	1962 —63
1. Rice	63.7	83.4	97.6	97.5	97.2	96.8	60.3	86.6	97.9	97.8	97.4	97.1	97.4
2. Wheat	68.5	96.4	98.4	98.5	98.3	98.4	68.0	98.1	98.9	99.0	98.9	98.7	99.2
3. Jowar	46.9	99.7	99.9	99.8	99.8	99.8	56.8	99.6	99.9	99.8	99.8	99.8	99.9
4. Bajra	36.9	99.6	99.6	99.5	99.4	99.4	53.8	99.2	99.4	99.3	99.2	99.1	99.3
5. Barley	81.6	91.9	97.9	97.9	97.8	98.8	6.3	93.9	98.7	98.8	98.7	98.0	99.3
6. Maize	30.5	56.7	91.4	91.6	91.3	91.6	38.8	68.6	92.8	98.0	92.7	93.7	93.0
7. Ragi	—	78.5	75.2	70.0	80.7	80.9	83.0	—	85.2	82.4	75.5	85.9	84.9
8. Small millets	—	—	25.4	27.0	27.7	28.6	28.6	—	—	14.4	18.5	15.0	18.4
9. Gram	—	96.5	98.5	98.6	98.4	98.4	98.7	—	98.4	99.3	99.0	98.8	99.3
10. Arhar (tur)	—	55.6	74.0	70.4	77.5	78.0	77.2	—	54.0	83.6	75.0	83.5	80.5
11. Other pulses	—	1.5	39.4	40.5	37.1	38.2	36.8	—	1.5	52.9	52.7	47.1	39.8
12. Sugarcane (cane)	—	3.6	73.4	84.6	83.6	82.8	91.8	—	7.8	71.2	80.7	76.3	77.4
13. Mesta	—	—	—	—	13.8	16.5	15.8	—	—	—	12.8	17.7	14.7
14. Cotton	24.0	2.8	69.3	69.6	73.5	85.9	91.5	17.6	3.5	67.8	57.5	66.5	71.2
15. Jute	—	56.3	99.0	98.5	98.6	98.6	98.8	—	58.6	99.0	98.3	98.3	98.7
16. Tobacco	—	23.9	21.6	27.1	66.3	69.8	65.1	—	21.8	18.2	27.7	69.7	71.6
17. Potato	—	23.3	24.3	23.9	38.9	47.9	47.5	—	21.8	28.3	36.2	49.3	55.8
18. Linseed	11.8	—	45.0	47.4	47.1	47.1	47.2	12.0	—	42.9	45.2	47.2	46.4
19. Sesamum	—	—	48.5	51.7	53.0	49.2	50.9	—	—	35.8	45.3	47.3	35.6
20. Groundnut	4.9	3.1	23.6	26.3	27.2	27.5	26.5	5.7	2.6	20.1	22.3	24.5	21.4
21. Rape and mustard	—	—	83.8	83.3	82.8	80.8	94.3	—	—	75.2	74.9	73.4	94.1
22. Castor	—	—	—	—	—	—	—	7.9	—	—	—	—	12.2

vegetable crops whereas for minor crops at the State level only. The pilot survey carried out by IARS have amply demonstrated the feasibility of obtaining reliable estimates of acreage and production of fruit and vegetable crops.

3. *Cashewnut and spices crops*: Besides cashewnuts, the major spices produced in India are cardamom, ginger, chillies and turmeric. Other spices like cinnamon, cloves, nutmeg, and vanilla are also grown to a limited extent. Some sample surveys have been carried out by the IARS on major spices and cashewnut crops, namely, the pilot survey on pepper in erstwhile Travancore-Cochin State and Malabar district of Madras State during 1954-55 in 1956-57; on cashewnut and cardamom crops in Kerala and Mysore States during 1960-63.

Although estimates are available for annual yield of principal crops at the district level, one cannot be very confident whether they are as precise as the estimates either at the state or at the national levels. Also with the adoption of Community Development Blocks as the units of planning and development, there is a need for obtaining estimates of crop production at the block level to judge the performance of different blocks and to plan on regional levels for increased agricultural production. It is heartening to note that the Institute of Agricultural Research Statistics had already launched pilot studies in selected states with a view to studying the problems associated with the estimation of crop production/average yield at block level which is a smaller unit than a district. This approach is also likely to improve the accuracy of district level estimates.

Forestry

The principal forest statistics relate to area under forests, volume of standing timber, outturn and value of timber and firewood, value of minor forest produce, employment in forestry and forest industry, forest revenue and expenditure and trade in forest produce. These are published annually in the *Indian Forest Statistics*¹ issued by the Directorate of Economics and Statistics which compiles these statistics on the basis of returns

¹ Prior to 1946-47, similar information was published in "Annual Returns of Statistics relating to Forest Administration in India".

received from forest departments of various State Governments. The data relate to financial years ending 31st March. A serious drawback of the statistics contained in this publication is that these have a time lag of about four years. Even the data in unpublished form available with the Chief Conservators of Forests and the State Statistical Bureaus are far from upto-date, although in this case the time lag is a little less, i.e. nearly two years. Steps are being taken to publish the forestry statistics without much time lag. For this purpose statistical cells are being established in state forest departments. Also a cell has been established at the Centre. The statistics relating to the major States in the Indian Union are more or less fairly complete in respect of major items but for smaller states the available data on certain items including private forests is not complete.

Area

The statistics of area under forests as given in the *Indian Forest Statistics*, are available according to types of forests, legal status, composition (types of wood) and ownership. Table 5 gives the classification of area under forests for years from 1950-51 to 1964-65. Besides, statistics of area for which reliable estimates of growing stock are available and areas closed and open to grazing are also published. The publication also gives details of working plans and concentrated regeneration and afforestation.

In respect of ownership, details are given for the area under State forests, forests owned by civil authorities, corporate bodies and private individuals. These are classified into those dedicated to timber production and other forests. These are further sub-divided into 'inter merchantable' and 'unprofitable or inaccessible' forests. The areas under forests are also classified according to legal status into reserved forests, protected forests and unclassed forests. These are given separately for the areas under Forest Departments, Civil Authorities, Corporate Bodies and private individuals.

Information regarding the composition of forest areas under the Forest Departments, Civil authorities, Corporate Bodies and private individuals is given separately in respect of coniferous and broad-leaved species, the latter being sub-divided into Sal, Teak, and miscellaneous varieties.

TABLE 5
Classification of Area Under Forests

Item	(in '000 sq. kilometres)						
	1950-51	1955-56	1960-61	1961-62	1962-63	1963-64	1964-65
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Total forest area	718.0	703.3	689.5	750.4	744.2	747.3	753.0
2. Ownership							
(i) State	596.4	678.5a	652.3	708.5	705.5	708.3	712.7
(ii) corporate bodies	1.6	0.6	22.9	24.8	24.4	24.3	24.6
(iii) private individuals	120.0	18.8	14.3	17.1	14.3	14.7	15.7
3. Legal status							
(i) reserved	344.4	359.5	316.1*	324.5*	324.7*	327.2*	327.2*
(ii) protected	117.9	168.1	240.6*	200.7*	209.7*	217.0*	226.0*
(iii) unclassed	255.7	170.2	112.1*	204.1*	188.8*	182.1*	179.4*
4. Composition							
(i) coniferous	36.3	25.2	43.0	43.7	45.0	45.1	46.2
(ii) non-coniferous							
(a) sal	105.5	104.8	113.5	107.9	95.2	95.2	97.8
(b) teak	43.5	58.1	87.5	92.1	89.7	89.9	91.2
(c) miscellaneous	532.7	509.7	445.5	506.7	514.3	517.1	517.8
(d) total non-coniferous	681.7	672.6	646.5	706.7	699.2	702.2	706.8

a. Includes 5.4 thousand sq. kilometres for which details are not available.

* excludes forest area of J & K since the information relating to these categories of legal status is not available for the state.

Source : *Indian Forest Statistics*.

The area under forests is divided under two broad categories, namely, exploitable and potentially exploitable, each of which is further sub-divided into reserved and others.

As stated earlier, details of areas closed to grazing of all animals throughout the year and areas open to grazing of all animals and of non-browsers are also published in the *Indian Forest Statistics*.

Estimates of total area under forests in the reporting areas of the Indian Union as given in the *Indian Agricultural Statistics* are based on the returns received from the State agriculture

or revenue departments and relate generally to the agricultural year ending 30th June. The area reported under 'forests' in this publication, however, are not in accord with the figures published in the *Indian Forest Statistics*, the former is usually less than the latter. Table 6 sets out in detail the State-wise differences in area under forests according to the two sources for the year 1960-61. These differences result in the two sets of

TABLE 6
Area under forests according to *Indian Agricultural Statistics*
(Ag. Stat.) and *Indian Forest Statistics* (IFSt.)—1960-61
(sq. kilometres)

States	1960-61	
	Ag. Stat.	IFSt.
Andhra Pradesh	58471	64185
Assam	48403*	45599
Bihar	37582	31160
Gujarat	9222	15589
J & K	31334	20792
Kerala	10562	10448
Madhya Pradesh	138264	172665
Madras	18659	21531
Maharashtra	54108	67811
Mysore	27089	36791
Nagaland	328	—
Orissa	36048	65915
Punjab	3707	15061
Rajasthan	8138	39420
Uttar Pradesh	37942	41468
West Bengal	11019	11779
Delhi	16	41
Himachal Pradesh	7927	10443
Manipur	6021	6022
Tripura	6357	6353
A. & N. Islands	6475	6475
Total	557672	689548

Source: DESAg.

*including NEFA

figures mainly due from (i) differences in definitions¹ of the area under forest, (ii) differences in purposes² for which these statistics are compiled by the two agencies, (iii) differences in geographical coverage³ of the two sets of figures ; and (iv) differences in reference periods,⁴ the last one however is not very important.

Volume of Standing Timber and fire-wood and their increment in exploitable forests: Data in respect of the volume of standing timber and fire-wood are given separately for different types of wood in *Indian Forest Statistics*. Figures of gross annual increment, natural losses, annual fellings and net increment are also given. Information in respect of a number of States is not available, especially in the case of private forests. The total figures given in this publication, therefore, do not indicate the true all-India picture.

Out-turn

The estimates of out-turn of forest produce in State, Corporate bodies and private forests are given under the following heads:

- (a) Timber and Firewood: Timber, round-wood, pulp-wood and charcoal wood.
- (b) Minor Forest produce : Animal products, bamboos and canes, drugs, spices, fibres and flosses, fodder and grazing, grass other than fodder, gums and resins, lac, rubber and latex, incense and perfume woods, tanstuffs and dyestuffs, vegetable oils and oilseeds, and other sorts of minor produce.

1. In the IFSt. returns, the whole area including non-wood area of unclassed forests under the control of forest department is taken as area under forests, while in the *Indian Agricultural Statistics* the same is classified according to its actual utilisation.
2. The Forest Department returns are meant to serve a definite administrative purpose and indicate the ownership of the forest areas; the actual utilisation of these areas is not so important as it is in the land utilisation statistics for Agricultural Statistics.
3. Whereas the Forest Department Reports cover the entire forest areas under jurisdiction of the State forest and other departments, the *Indian Agricultural Statistics* relate only to the reporting areas.
4. Figures in *Indian Agricultural Statistics* relate to the agricultural year (July to June) while those in *Indian Forest Statistics* relate to financial year (April to March).

In the case of timber and firewood, figures of both quantity and value are given, whereas in the case minor forest produce only value figures are given.

The areas managed by the State Forest Departments are generally fully covered, but those under the ownership rights of corporate bodies, civil authorities, and private individuals are not covered. The position in this regard, prevailing during the years 1953-54 to 1958-59 is given in the following table.

TABLE 7*
Area under Forests** for which out-turn statistics
are available in the *Indian Forest Statistics*

(In '000 sq miles)

<i>Ownership type</i>	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59
1	2	3	4	5	6	7
1. Forest Department	2041.3 (93.1)	2148.1 (93.0)	2336.8 (99.9)	2385.3 (100.0)	2462.2 (100.0)	2412.9 (100.0)
2. Civil authorities	167.9 (35.5)	253.8 (64.0)	128.9 (42.7)	166.7 (62.4)	138.4 (70.4)	147.2 (68.4)
3. Corporate bodies	0.2 (3.1)	0.6 (24.9)	0.05 (2.3)	0.9 (48.4)	0.9 (35.6)	0.1 (5.5)
4. Private individuals	29.6 (16.2)	24.2 (29.9)	29.7 (41.0)	51.2 (71.2)	25.6 (30.9)	54.4 (72.9)
5. Total : All types of ownerships	2239.0 (79.8)	2426.7 (86.7)	2495.4 (91.9)	2604.1 (95.5)	2627.1 (95.7)	2614.6 (96.7)

* Figures within brackets represent the percentages of area covered to total area under forests for each category.

** Source: National Income Statistics—proposals for a revised series of National Income Estimates for 1955-56 to 1959-60, issued by C.S.O., Government of India, 1961, p. 68. The data for the years 1956-57 onwards has been compiled from the unpublished records of the DESAg.

Another limitation of these out-turn data is that they represent only the authorised exploited forest resources. Thus all such unauthorised removals of timber or fire-wood of any description are obviously missed from the official production data. Although it is difficult to collect data pertaining to unauthorised removal, but possibility of doing this should be explored.¹

1. Some *ad hoc* estimates of unauthorised removal of timber etc, are available in the *Report of the Timber Trends Survey*,

Employment of Labour in Forestry and Forest Industries

'*Indian Forest Statistics*' contains information about the number of persons employed on the first of each month in forestry and forest industries together with details of persons dependent mainly or partially on them. It also gives the number of industrial units in each State. Figures of the quantity and value of wood used and value of minor produce utilised in these units are given separately.

Revenue and expenditure

Figures of revenue and expenditure of Forest Departments are given in detail in *Indian Forest Statistics*. A summary table showing figures of revenue and expenditure over a period of years is also given. Expenditure on communications and buildings with details of new works and repairs to existing works is also given in a separate table.

Foreign Trade

Figures of quantity and value of imports and exports of wood and timber and value of imports and exports of minor forest produce and wood products based on the *Monthly Statistics of Foreign Trade of India* are also given in the *Indian Forest Statistics*.

Miscellaneous

Information on a number of items, such as breaches of forest rules, grazing of cattle in government forests etc., is also published in the *Indian Forest Statistics*. Statistics of area and out-turn of timber and fuel in respect of certain countries of the world are also given.

To enhance the utility of the forest statistics and to bring it in line with other countries, a revised set of proformae were introduced in 1958-59. One of the most important salient features of the revised system is to adopt the same definition of 'forest' areas as adopted in the *Indian Agricultural Statistics*. Accordingly all such un-wooded or other areas put to some agricultural or non-forest use would be left out from 'forest' areas and indicated separately, thus bringing the two sets of 'forest' area estimates closer. Besides giving the following addi-
: ' data, viz. (i) area of forests surveyed with topographical

details, (ii) out-turn of logs, sleepers etc., (iii) species-wise out-turn of timber and fuel wood and (iv) out-turn and volume of minor produce, the revised system provides for collection and publication of data pertaining to (a) annual consumption and carry over of wood and minor forest produce, (b) wholesale prices of forest produce and (c) game shot in the State etc. These data on revised lines are, however, available only from 1958-59 onwards. Besides, owing to significant changes in the ownership pattern of forests, from 1950-51 onwards (Table 4), the extent of reporting of production has also increased appreciably. It is observed that the proportion of forest area under corporate bodies and private individuals to total forest area has decreased from 16.9 per cent in 1950-51 to 5.3 per cent in 1964-65. This was in consequence of the National Forest Policy announced in May, 1952 whereafter sizable portions of privately owned forests were acquired by State Governments through legislation.

Other sources of forest statistics

In addition to the important sources mentioned above, there are other *ad hoc* publications giving valuable information on forests. These are (i) *India's Forest and the War*, (ii) *100 years of Indian Forestry, 1861-1961*, (iii) *The Timber Trends Study for the Far-East Country Report for India* (TSS), and (iv) *The Timber Trend and Prospects in India, 1960-75* (TTP). Of these, the first one was brought out by the Directorate of Economics and Statistics, whereas the second one was issued on the occasion of celebration of Indian Forest Centenary by the Forest Research Institute (FRI), Dehradun. The TTS Report is based on an extensive study undertaken by the Inspector General of Forests on behalf of the Food and Agricultural Organisation as a part of their study for the Asia Pacific Region, the TTP has been compiled by the FRI in compliance with the request of the Asia Pacific Forestry Commission Authorities.

The TTS Report, besides reproducing the data on area and out-turn of forest produce from the *Indian Forest Statistics*, gives information on (i) methods of logging operations and wastes and losses incurred during logging, (ii) labour employed in logging, (iii) production costs at different stages of felling exploitation such as stumpage prices, felling costs,

charges from stump to permanent lines of transport and transport charges along these permanent lines, (ii) supply and consumption of round wood, fuel-wood and charcoal, bamboo and palm species, (v) State-wise movement of round wood, and (vi) future supply of raw materials from indigenous sources etc.

Similarly, the TTP Report besides giving data on area and production, contains information on (a) indigenous supply of industrial and fuel wood, (b) losses in logging and transportation, (c) unrecorded production of major and minor forest products, (d) current consumption and future requirements of industrial and fuel wood, (e) estimated production of industrial wood and fuel wood from trees outside forests, and (f) future supply possibilities etc.

Statistics relating to forests are also available in a summary form in the following publications:

	<i>Title</i>	<i>Published by</i>
1.	<i>Abstract of Agricultural Statistics, India.</i>	Directorate of Economics and Statistics.
2.	<i>Statistical Abstracts of Indian Union (Annual)</i>	Central Statistical Organisation.
3.	<i>Administration Report of the Forest Departments</i>	State Government.

Gaps

- (i) Statistics of tree-lands outside forest areas i.e., along roads, canal banks etc.,
- (ii) Volume, annual growth and out-turn of forests area owned by corporate bodies and private individuals,
- (iii) Standardisation of some of the classifications of forest areas, e.g. merchantable and exploitable areas, which are overlapping,
- (iv) Manual on the methods of collection of forest statistics,
- (v) Statistics of prices of stumps, cost of selling, cost of transportation from stump to nearest market centres, cost of maintenance of boundaries and survey operations, cost of regeneration, afforestation, and conservancy operations, cost of fire protection measures, income from license fees etc.
- (vi) Statistics of various inputs like forest implements,

improved seeds and plants, fire protection equipments etc., the quantity and value of various forestry outputs going into major forest industries like plywood, metal, pulpwood paper, shipping industries etc.

Animal Husbandry

Gaps in statistical data in the field of livestock and poultry are of a more serious nature as compared to crop statistics. The main source of data in this field at present is the quinquennial livestock census. It collects data on number of livestock, poultry and agricultural implements. The last census was conducted in 1966. A post-enumeration sample survey of the 1966 Livestock Census has been conducted by the NSS to provide data on additional items like age, composition, breed, immunisation against rinderpest, average lactation period and average calving interval. The results of the livestock census are published in the *Indian Livestock Census*¹ (Quinquennial), Volume I (Summary Tables) and Volume II (Detailed Tables). Volume I gives all India and State-wise figures about number of livestock and poultry. Volume II gives district-wise details. The rural and urban break-up of the data are also given in both the volumes.

The information presented in these tables² relates to number of (i) cattle classified as (a) male over three years³ (breeding, working and others), (b) females over three years (in milk, dry and not calved, working and others), (c) young stock (three years and under); (ii) buffaloes with similar classification as in the case of cattle; (iii) sheep (one year and above, under one year); (iv) goats (one year and above, under one year); (v) horses and ponies under the three heads, viz. (a) males over three years, (b) females over three years, (c) young stock (three years and under); (vi) donkeys; (vii) mules⁴; (viii) camels⁵; (ix) pigs; (x) poultry classified as fowls⁶, ducks and other birds.

1. The first issue was brought out in 1945.

2. According to 1956 Census

3. In 1961 Census, this classification was expanded to include information on castrated and incastrated animals used for work only.

4. In 1961 Census, age classification was introduced for mules.

5. Total fowls was classified in 1961 census into *Desi* and improved;

Livestock Products

The estimation of important livestock products, and their utilisation are worked out by the Directorate of Marketing and Inspection (DMI) on the basis of marketing surveys and the Directorate of National Sample Survey on the basis of surveys conducted during their regular rounds.

Some of the commodities surveyed in respect of which market reports have been published are milk, ghee and other milk products, wool, hair, hides, meat, bones bristles, poultry and eggs. The output of milk products e.g. ghee, butter, dahi, cream khoya, channa etc. are estimated by market reports through certain conversion ratios fixed on the basis of *ad hoc* enquiries.¹ The statistics of livestock products are therefore not based on scientific or objective investigations. The IARS has conducted random sample surveys in a few states. Information on livestock products is also available in the NSS Draft Report No. 100 (15th round July 1959-June 1960).

It is suggested that :

- (i) Full-fledged statistical units should be set up in animal husbandry and dairying departments in each State.
- (ii) Similar statistical cells be set up under the concerned advisers in the Ministry of Food & Agriculture to co-ordinate and guide the activities of statistical cells in the State.
- (iii) Until the State-wide surveys are conducted by respective states, the IARS should extend its surveys for estimation of production of milk, meat, egg and poultry and collection of data, animal husbandry, sheep rearing and poultry practices to areas not covered so far, so as to provide estimates at least at the all-India level. IARS should repeat these surveys at suitable intervals in order to study changes taking place.

Statistics of livestock and livestock products are also published in :

- (i) *Abstract of Agricultural Statistics, India* (Annual), DESAg.

1. The DMI has made efforts to improve estimates of output of milk and milk products by collecting data from State Animal Husbandry Departments and the State Marketing Offices.

- (ii) *Statistical Abstract of Indian Union* (Annual), Central Statistical Organisation.
- (iii) *Report on a Village Enquiry regarding cattle and the production and consumption of Milk of Seven Breeding tracts of India* (ICAR)
- (iv) *Proceedings of the Tenth Conference of the Indian Society of Agricultural Economics* (ISAE).
- (v) *Indian Livestock Statistics* (Annual), DESAg.

Fishery Statistics

One of the main sources of data relating fisheries is the '*Report on the Marketing of Fish in the Indian Union*' brought out by the Directorate of Marketing and Inspection.¹ This report contains data on various items such as total estimated landing of Marine fish, marketable surplus of fresh water fish, prices prevailing in some important producing as well as consuming areas by popular varieties of fish and by states, gross distributive margins, and utilisation of fish for various purposes, for household consumption or fish in fresh form, salting and sun drying and manure.

The statistics of marine fish catches are at present collected by the Central Marine Fisheries Research Institute, Mandapam through sample surveys. It has a net work of selected observation centres, each operating under a Fishery Survey Assistant, spread on the east and west coasts of India which form the main source of supply of marine fish. The data collected at these centres on actual catch, the trends of annual changes in fisheries and the fluctuations therein, are used for estimating the annual marine fish landings². The estimates of fish landings are framed zone-wise by important species of fish. These data are analysed in great detail and published annually in the *Indian Fisheries Bulletin*. Data on fish landings by composition are, however, published at all India level only. Statistics are also maintained on total effort in man-hours expended in each zone and catch in kilograms per man hour. The data on catch are maintained on monthly basis. The *Bulletin* gives statements on percentage distribution of total landings by months of each calendar year.

1. So far three reports have been brought out, the last one was in 1961.
 2. These include the landings from mechanised vessels also.

Data on (i) fish catch and landings by groups of species and (ii) disposition of fish catch, are also published annually in the *Statistical Abstract of Indian Union*. These are obtained from the Fisheries Development Adviser.

Some of the States have also taken steps during recent years to collect various types of fishery statistics with the help of existing agencies, but there does not appear to be much uniformity in the items of information being collected, method of collection, agency employed etc. As a result, no statistics are available at the all-India level.

The inland fisheries statistics are collected by the Central Inland Fisheries Research Institute, Barrackpore. Data are collected from the rivers of Ganges, Narbada, Tapti, Godavri and Krishna and also from Matla-Mahanadi estuaries and Chilka lake. The information is neither representative nor adequate and it could hardly be used for estimating the production of inland fish at the state level. The National Sample Survey have also conducted a sample survey on fresh water fish in India.

Gaps and suggestions

There is need of extending the surveys on marine fish catch on items not included at present and of inland fisheries surveys to other rivers not included at present.

The surveys conducted by the Central Marine Fisheries Research Institute, Mandapam and the Central Inland Fisheries Research Institute, Barrackpore, for estimation of marine and inland fisheries should be suitably guided and co-ordinated by setting up a statistical cell. This Unit would also advise the States on the types of the data and frequency with which it should be collected. It would also be helpful if fullfledged statistical units are set up in Fishery Departments in each State. The methodology developed by the IARS should be implemented by all maritime States to obtain catch of fish.

Index of Agricultural Production in India

The index of agricultural production in India is compiled and published regularly by the Directorate of Economics and Statistics (DESAg). The first series of index numbers of agricultural production covering 19 principal agricultural commo-

dities for which estimates of production were then available was compiled with quinquennium ending 1938-39 as the base and published in the January 1949 issue of the monthly journal '*Agricultural Situation in India*'. Owing to the extension in the scope, number, and coverage of the crop estimates, a revision in the method adopted earlier was considered necessary. A revised series of index numbers was accordingly constructed by the Directorate.

The present index of agricultural production is based on 28 crops divided into two main groups and into six sub-groups. The crops included and the weights assigned to each are set out in the table below.

TABLE 8
Index Number of Agricultural Production in India
(Base : Agricultural year 1949-50-100)

<i>Commodity Group</i>	<i>Weight</i>
Foodgrains	
(a) <i>Cereals</i>	
(1) Rice	35.3
(2) Jowar	5.0
(3) Bajra	2.7
(4) Maize	2.1
(5) Ragi	1.2
(6) Small Millets	1.5
(7) Wheat	8.5
(8) Barley	2.0
Total cereals	58.3
(b) <i>Pulses</i>	
Gram	3.7
Tur	1.1
Other Pulses	3.8
Total Pulses	8.6
Total Foodgrains	66.9
Non-Food grains	
(a) <i>Oil Seeds</i>	
(1) Groundnut	5.7
(2) Sesame	1.2
(3) Rape and Mustard	2.0
(4) Linseed	0.8
(5) Castorseed	0.2
Total oilseeds	9.9

<i>Commodity Group</i>	<i>Weight</i>
(b) Fibres	
(1) Cotton	2.8
(2) Jute	1.4
(3) Mesta	0.3
Total Fibres	4.5
(c) Plantation crops	
(1) Tea	3.3
(2) Coffee	0.2
(3) Rubber	0.1
Total Plantation crops	3.6
(d) Miscellaneous	
(1) Sugar cane	8.7
(2) Tobacco	1.9
(3) Potato	1.0
(4) Pepper	1.2
(5) Chillies	2.0
(6) Ginger	0.3
Total Miscellaneous	15.1
Total Non Foodgrains	33.1
Total all Commodities	100.0

This index is a considerable improvement over the earlier series of index numbers, which was based on 19 crops and covered only a part of the country, namely, the previous British India and some of the Indian States. Although in principle, the index of agricultural production should cover all agricultural crops and also livestock production, but owing to the non-availability of reliable annual estimates of production of minor crops and livestock products, the scope of the present series has been confined to the 28 crops listed above. V.G. Panse and V.S. Menon in their paper '*Index Numbers of Agricultural Production in India*'¹ have suggested that the present index may be called the index numbers of crop production to describe its scope correctly and also to serve as a reminder of its limitations and need to enlarge its scope to cover animal husbandry.

1. Reproduced from the *Indian Journal of Agricultural Economics*, Volume XVI, No. 2 (April-June 1961).

The year 1949-50 has been chosen as the base period for the index number on the following grounds :

- (i) It was a relatively normal year in recent years for agricultural production especially food production for which it has been adopted as the base year for the first five year plan. The years 1950-51 and 1951-52 were characterised by droughts and consequent fall in food production and were thus abnormal.
- (ii) The average price level during the agricultural year July 1949 to June 1950 was also relatively normal at least so far as agricultural commodities in India were concerned and was unaffected by the boom and to a certain extent even by devaluation on account of the usual time lag and corrective action taken by the Government of India.
- (iii) Official and crop cutting estimates of production of foodgrains in 1949-50 were very nearly equal and as such the official estimates of production were comparatively free from bias of under-estimation.

It may be mentioned that an average for a period of 3 to 5 years would have been better as base period, but as no such period could be selected the present series is based on a single year's production.

This index number is a fixed base quantity index of the Laspeyres type. The weights have been assigned to the different commodities in proportion to total value of production of each crop during the base period. The output has been evaluated at the annual harvest prices prevalent during the year 1949-50. In a very few cases such as for rubber, ginger and chillies where these prices were not available, the average wholesale prices during the past harvest period of that year have been used with appropriate adjustments. The weights assigned to various commodities are indicated in column 2 of Table 8 given above.

The index numbers have been constructed by the chain base method in order to provide for changes in the estimated production due to extension in geographical coverage or to variation in the method of estimation over time. These are, therefore, better indicators to be used rather than absolute figures in analysing the trend of production as or of any of the commodity. The subgroups, the gro

all commodity index numbers are the weighted arithmetic averages of production indices of crops covered.

The assumptions involved in the method are :

- (i) that the variation in production in the non-reporting areas is the same as that in the reporting areas in the aggregate, and
- (ii) that the variation in the figures of production based on the new method of estimation is the same as in the figures based on the old method of estimation.

The practical application of (ii) above would require that for the transitional year, when the method of estimation undergoes a change, production figures should be made available on the basis of new as well as old methods of estimation. In case where these are not available comparable estimates have been utilised after making due allowances for the changes in coverage. It is reported that such cases have been very rare.

The index numbers should be based on the revised estimates of production issued in the crop forecasts from time to time. However, since these estimates are available only next year, the Index Numbers for the current year are provisionally based on final forecasts for the current year, the revised estimates for the previous year are, however, utilised for that year. The index number for current year, say 1953-54, is linked through the revised estimates for the year 1952-53 published in the current year's forecast and the revised estimates for 1951-52 published in 1952-53 where the geographical coverage of the two forecasts remains the same. Otherwise, suitable adjustments are made for the changes in coverage.

The concept of production utilised in the series is essentially that of gross production of crops, no allowance being made for seed or wastage. It may be added that F.A.O. series of Index Numbers of Agricultural Production are also essentially based on gross output, but that organisation deducts quantities of crops, milk utilised as animal feed, whether they come from domestic or import sources. This is done to avoid double counting which would occur if foodgrains credited to the crop production are fed to livestock and the resultant livestock production are included in the index. This situation does not, however, arise in the present case since livestock products are

' 1 ' from the scope of this Index.

Selected Additional Bibliography

1. Government of India (1962), *Guide to Current Agricultural Statistics*, Directorate of Economics & Statistics, Ministry of Food & Agriculture.
2. Government of India (1966), *Report of the Working Group for the Formulation of the Fourth Five Year Plan Proposals on Agricultural Statistics*, Directorate of Economics and Statistics, Ministry of Food and Agriculture.
3. Indian Council of Agricultural Research (1951), *Sample Surveys for the Estimation of Yield of Food Crops 1944-49*, New Delhi.
4. Panse, V.G., and Rao V.P., (1951), *System of Agricultural Statistics*, International Statistical Conference, Vol XXXIII, Part V, Bulletin of the International Statistical Institute
5. Government of India, *Agricultural Statistics of India*, Volumes I and II, DESAg.
6. *Report of the Royal Commission on Agriculture in India*, Bombay, 1928
7. Agricultural Situation in India, monthly, DESAg.
8. Indian Livestock Censuses, DESAg.

5

Industrial Statistics

Introduction

Industrial statistics is a branch of economic statistics and forms an integral part of the science of statistics. It is an extremely important lever for direction of industry, for supervision over the realisation of plans established by the government for the industry and by the industry itself, for control over the progress of the plan and for discovering the reserves. Industrial statistics helps to correct, adjust and improve the current plans and at the same time provides necessary information for preparing new plans for subsequent periods.¹ More precisely, basic industrial data are needed to ascertain the contribution of the industrial sector to the national economy and the structure and characteristics of this sector, to measure the expansion in industrial activities and resources, and to evaluate the potentialities for, and problems of, growth in industrial activity. The objectives with which basic industrial inquiries have been and are being conducted in India can be briefly stated as under :

- (i) estimation of the contribution of manufacturing industries as a whole and of each unit to the national income,
- (ii) systematic study of the structure of industry as a whole and of each type of industry and each unit,
- (iii) causal analysis of the various factors influencing industry in the country, and
- (iv) provision of comprehensive factual and systematic basis for the formulation of policy.

1. Ezhov, A.I., *Industrial Statistics*, Asia Publishing House and Statistics Publishing Society, Calcutta, 1960, p. 1.

History of Industrial Statistics in India

Although industrial statistics is one of the most important tools of government administration of industry and planning of industrial production, the data on industrial statistics of India prior to the World War II are fragmentary. The available information relating to some of the major large-scale industries collected by non-official agencies like associations and chambers of industry, trade and commerce, *ad-hoc* bodies like tariff commissions, fiscal commissions, government authorities, research institutions and private investigators was very meagre and had to be gleaned from occasional reports, gazetteers, monographs and research studies. The information which could thus be obtained in response to certain specific needs and on voluntary basis was not of requisite quality. The statistics were not only inadequate, but their difference from one another in scope, content, methods, periodicity, degree of details and accuracy was so markedly pronounced that these could not be used for formulation of economic policies and programmes of industrial development.¹

Collection of statistics of some of the large scale industries in India could be traced back to the last quarter of the 19th century. For example, information relating to distilleries and breweries is available from 1877, cotton textiles and jute textiles from 1879, production figures for woollen textiles and paper are available from 1884, iron and steel and petroleum from 1890 and kerosene oil from 1900. Data collected relate to number of establishments, nominal capital employed, average number of persons employed, machinery and equipment installed, quantity and value of production, and description of production. These figures were published in a number of publications to varying extent. *Statistics of British India* Vol. II (Commercial), *Statistical Abstract of British India* and *Statistical Abstract relating to British India* are some of the publications in which the production figures were published.²

Production figures in respect of other industries such as cement, sulphuric acid, sulphate of ammonia, wheat and flour,

1. Naik, Y.P. "Development of Industrial Statistics in India", *Sankhya*, Ser. B, Vol. 25, Parts 3 and 4, Dec. 1963,

2. *Ibid.*

Organisation, Cabinet Secretariat, launched the first statutory survey of industries under the Collection of Statistics Act, 1953 and the Collection of Statistics (Central) Rules, 1959 and was named as Annual Survey of Industries. Data for the two years 1957 and 1958 were collected from all Industrial establishments covered under the Census of Manufactures on a voluntary basis, so as to have a complete series. The Annual Survey of Industries (ASI) under which data on industrial statistics are presently collected has two parts, a census part and the other as a sample part, the details of which are discussed in subsequent paragraphs.

Information Available from Census of Manufactures (CMI)

Organisation and staff: At the Centre, the Director of Industrial Statistics, was placed incharge of the Census. A separate organisation known as Directorate of Industrial Statistics was set up towards the end of 1945 for this purpose. From 1st July 1947, the Directorate was merged in the C.S.O. and became Industrial Statistics Wing of the C.S.O. In the Provinces (States), the Provincial (States) Statistics Authorities were appointed under Section 4 of the Industrial Statistics Act 1942 by the respective Provincial (State) Governments. Suitable organisations were established to conduct the census, the actual strength of the various categories of staff in each Province (State) depending on the number of establishments, geographical dispersion of factories, preponderance of small factories and such other related factors.

Classification of industries and establishments : All factory establishments employing 20 or more workers on any day and using power (establishments registered under section 2(j) of the Factories Act, 1934 and under section 2 (m) (i) with minimum employees as 20 of the new Factories Act, 1948) were classified under 63 industry groups (known as the CMI classification) but it covered the following 29 industries (industry groups) only : (1) wheat flour, (2) rice milling, (3) biscuit making (including bakeries and confectioneries), (4) fruit and vegetable processing, (5) sugar, (6) distilleries and breweries (including power alcohol manufacturing), (7) starch, (8) vegetable oils—oil seed crushing and extraction and processing of vegetable oils, (9) paint and varnishes, (10) soap, (11) tanning, (12) cement; (13) glass and glass ware, (14) ceramics, (15) plywood and tea chests, (16)

Industrial Statistics (Industrial Statistics Wing of C.S.O.) from the data collected in the above census. It would be seen from the following list which gives the more important items of tabulation that the data thrown by the C.M.I. are comprehensive and covers all aspects of manufacture :

1. Number of factories : (a) registered, (b) returns received, (c) per cent coverage
2. Average number of days worked
3. Productive capital employed : (a) fixed capital (b) working capital
4. Number of persons employed : (a) workers, (b) other than workers
5. Salaries and wages: (a) workers, (b) other than workers, (c) money value of benefits and other privileges
6. Materials, fuels, electricity, lubricants etc. consumed :
 - A. Fuels, electricity, lubricants etc ;
(a) quantity, (b) value
 - B. Materials ; (a) quantity, (b) value
7. Amount paid to other concerns for work done for factory
8. Cost of transport of materials, fuels etc. to factory, commission to purchasing agents, etc. where these are not included in the reported value
9. Production : (a) quantity, (b) value
10. Amount received from others for work done for them
11. Cost of transport of products from the factory, commission to selling agents, etc. where these are included in the reported value (minus)
12. Value added by manufacture.

Limitations of the census data : While using the census data, certain limitations may be borne in mind. The data available in the different census reports are not comparable due to the varying territorial coverages. Some important industries like tea, tobacco, electricity generation are not included in the census. Profits and, or value added by manufactures cannot be calculated accurately from the census statistics because no information was collected in the census on items like interest, insurance, taxes and advertising charges etc. While comparing the value figures given in the census, account must be taken of the price changes from year to year. The extent of non-responding

factories was also large and the same varied from year to year. For instance, the extent of non-response was 10 per cent in 1954, 12 per cent in 1957 and 18 per cent in 1958.

Sample Survey of Manufacturing Industries (SSMI)

The Census of Manufacturing Industries conducted under the Industrial Statistics Act, 1942 was found deficient in many respects. It covered only the 29 industries out of the 63 industrial groups into which all establishments were classified for the purpose of the census. Despite the revision of the Factories Act in 1948 to include all Factories employing 10 or more persons and using power or employing 20 or more workers and not using power, the Census of Manufacturing Industries was still confined to the Factories defined under Section 2(j) of 1934 Act, i.e. factories employing 20 or more workers and using power. An idea regarding under-coverage can be had from the following :

"Further, although by that time a large number of establishments should have been considered as Factories according to the 1948 Factories Act, the Census had been working on the basis of the older definition of factories according to the 1934 Act. The difference was indeed large. Under the 1948 Act, there were 28,000 factories in the country in 1949 but according to the older definition, there were only about 17,000 factories and the census was covering 6,500 and 7,000 factories only."¹

On the recommendations of the National Income Committee, Directorate of Industrial Statistics conducted a 'Sample Survey of Manufacturing Industries' with reference years 1949 and 1950 with the technical assistance of the Indian Statistical Institute, Calcutta. The geographical coverage was extended to the whole of India (except Jammu & Kashmir and Andaman & Nicobar Islands). The survey covered all the 63 groups of industries (list given in Appendix I at the end of this chapter) with the exception of ordnance factories and railway workshops. The survey remained confined to those factories which employed 20 or more workers and used power, as the list of establishments falling under the categories 2(m) (i) and 2(m) (ii) of the

1. *Report on the Sample Survey of Manufacturing Industries 1949 and 1950* (NSS Report 11) Cab. Sectt. Govt. of India, 1958, page iii.

Factories Act, 1948 were not available at the time of design of the survey. Thus the sample survey of 1949 and 1950 covered only about 17,000 factories out of a total of about 28,000 factories. In the first round of the sample survey with reference years 1949 and 1950 data were collected on the same items and with similar details as in the Census of Manufactures. The concepts, terms and definitions used were practically the same as in the Census of Manufactures.

From 1951 onwards all the technical work relating to the survey was transferred to the Indian Statistical Institute, Calcutta. The field work was entrusted to the Directorate of National Sample Survey which was already engaged in the collection of data on the socio-economic enquiries of the NSS. In 1952 the coverage was extended to cover all establishments which fell under the Factories Act, 1948. From the survey for the reference year 1954, the scope of the sample surveys was modified to cover scheduled undertakings (establishments, plants or technical units) licensed under the Industries (Development and Regulation) Act, 1951. In 1956 and 1957, it was further extended to cover all classifications including coal. In the 1958 Survey, 162 types of scheduled industries (vide Appendix II) under the 1957 Act have been covered. Data relating to these scheduled undertakings were processed separately. NSS Report No. 111 gives results for factory establishments for the year 1958.

The scope of the sample survey was enlarged to cover a wide variety of subjects relating to different aspects of the manufacturing industries. Although the concepts, terms and definitions used in the sample surveys conformed broadly to the concepts, terms and definitions of the Census of Manufactures, certain minor changes were made in the subsequent rounds of the sample survey. The value added by manufacture as given by the sample survey differs from the value added by manufacture as given by the Census of Manufacturers in that the former is gross of depreciation while the latter is net of depreciation. Unlike the CMI, the SSMI gave blown up estimates for the entire population.

Annual Survey of Industries (ASI)

Collection of Statistics Act 1953: In 1953, the Lok Sabha passed the Collection of Statistics Act, (No. XXXII of 1953)

which was brought into force from 10th November 1956, when the Industrial Statistics Act, 1942 stood repealed. The Collection of Statistics Act, 1953 is radically different in structure, composition and legalistic aspects from the Industrial Statistics Act, 1942. Under the new Act powers have been conferred concurrently on both Central and State Governments for collection of statistics relating to any of the matters specified in the Act with over-riding powers vesting in the Central Government. While the Industrial Statistics Act, 1942 authorised collection of statistics from factories only, the Collection of Statistics Act, 1953 authorises collection from a wider field covering almost all economic activities. Statistics can be collected relating to any of the following matters, namely, (a) any matter relating to any industry or class of industries ; (b) any matter relating to any commercial or industrial concern or class of commercial or industrial concerns, and in particular, any matter relating to factories ; (c) any of the following matters so far as they relate to welfare of labour and conditions of labour, namely, (i) prices of commodities, (ii) attendance, (iii) living conditions including housing, water supply and sanitation, (iv) indebtedness, (v) rent of dwelling houses, (vi) wages and other earnings, (vii) provident and other funds provided for labour, (viii) benefits and amenities provided for labour, (ix) hours of work, (x) employment and unemployment, (xi) industrial and labour disputes, (xii) labour turnover, and (xiii) trade unions.

Though the Act was brought into force on 10th November, 1956, it took nearly three years to frame the Rules. The Collection of Statistics (Central) Rules, 1959 were finally notified on 2nd January, 1960.

The first statutory 'Survey of Industries' under the Collection of Statistics Act, 1953 was launched by the Government of India in 1960 with reference year 1959. With the launching of this survey, the Census of Manufactures conducted from 1946 to 1956 on a statutory basis and for 1957 and 1958 on a voluntary basis and the Sample Survey of Manufacturing Industries were discontinued.

Design, scope and coverage of the survey

Under the Annual Survey of Industries data are collected on a census basis from all factories employing on any day 50

or more workers with power and 100 or more workers without power, and on a sample basis from factories employing 10 to 49 workers using power and 20 to 99 workers not using power, and industrial concerns happened to be selected on the probability sample of about 25 per cent. The entire factory sector is thus covered by the integrated survey and the census part is estimated to account for 86.6 per cent of the total productive capital of all factories in all industries, 81.6 per cent of employment, 81.6 per cent of gross output and 84.3 per cent of value added by manufacture. As in the Censuses and Sample Surveys of Manufacturing Industries, the establishments owned, managed or controlled by the Ministries of Defence and Railways and training workshops attached to the technical institutions were excluded from the survey. The Act extends to the whole of India except the State of Jammu & Kashmir. However, the factories in Jammu & Kashmir were covered on a voluntary basis.

An integrated form of return to meet the requirements of both CMI and SSMI and consisting of two parts, viz., census and sample, was designed for the ASI relating 1959. The census part covers all the factories employing 50 or more workers and using power, and 100 or more workers not using any power whereas sample part covers all the factories employing 10 to 49 workers using power or 20 to 99 workers not using power. But certain difficulties were experienced both by the reporting as well as the collecting agencies in filling the form for 1959. It was felt that the form of return prescribed was unwieldy and needed rationalisation to avoid duplication and to avoid such items which were not necessary to be repeated every year. As a result, a single form of return without separate parts was adopted for both census and sample surveys. Same set of concepts and definitions were adopted for all types of establishments. A number of items like distributive costs during the year, equipment other than power equipment, present age and further expected life of buildings, plant and machinery, management and industrial relations, particulars of training facilities given by the factory, particulars relating to industrial research etc. were deleted from the original form. A facsimile of the form used in the Annual Survey of Industries is given in Appendix III to this Chapter.

The factory establishment is the statistical unit and the survey year is the calendar year in respect of all the industries except in the case of (1) sugar, (2) cotton ginning, cleaning and pressing, and (3) electricity undertakings for which the survey years are (i) July-June, (ii) September-August, and (iii) April-March, respectively. The data are collected through a combination of mail and field enquiry. The non-response is very much minimised as a result of close follow-up by the NSS field staff. The response in the Annual Survey of Industries, 1964 improved to 98 per cent from 94 per cent under the earlier surveys. No estimates are made to cover non-response on a regular basis as the gaps have never been of any serious magnitude.

The industries covered by the current survey have been classified according to International Standard Industrial Classification (ISIC). According to *International Recommendations in Basic Industrial Statistics* published by the U.N., the field to be covered is "all establishments or similar units located within the geographical boundaries of the country and engaged primarily in mining, manufacturing and the production of electricity, gas steam, and construction, i.e., units that would be classified in major groups 11-51 inclusive of the ISIC". The current programme of collection of statistics covers the entire manufacturing sector. As the units engaged in the production of electricity, gas and steam are factories, this field of enquiry is also included under the ASI. But it has not been found feasible to cover construction sectors as yet due to various practical difficulties. In regard to mining, under the Minerals Conservation and Development Rules, 1958, the Indian Bureau of Mines is collecting a good deal of information.

Under the Collection of Statistics (Central) Rules, 1959, the Chief Director, National Sample Survey, Cabinet Secretariat, has been appointed as the statistics authority. The field work of collection of data is performed by the field staff of the NSS, while the technical details such as the designing of the survey, processing of data and publishing the results are looked after by the Industrial Statistics Wing of the CSO. The results of the ASI (census sector) are published in 10 volumes by the CSO and those of the 'Sample Sector' are published by the National Sample Survey in their regular reports.

Volume I of the report gives the summary tables together with an introduction and a memorandum on definitions, concepts and procedure. The remaining 9 volumes give the detailed information relating to various industries and industry groups. Each of these volumes cover only a few major groups of the ISIC. The distribution of major groups into these volumes is given below :

<i>Vol.</i>	<i>Major Group</i>	<i>Industry</i>
II	20	Food Manufacturing Industries except Beverage Industries.
	21	Beverage Industries.
III	22	Tobacco Manufactures.
	23	Manufacture of Textiles.
IV	24	Manufacture of Footwear, Other Wearing Apparel and made-up Textile Goods.
	25	Manufacture of Wood and Cork except Manufacture of Furniture.
	26	Manufacture of Furniture and Fixtures.
	27	Manufacture of Paper and Paper Products.
	28	Printing, Publishing and Allied Industries.
	29	Manufacture of Leather and Fur products except Footwear and Other Wearing Apparel.
	30	Manufacture of Rubber Products.
V	31	Manufacture of Chemicals and Chemical Products.
VI	32	Manufacture of Products of Petroleum and Coal.
	33	Manufacture of Non-metallic Mineral {Products except products of petroleum and coal.
VII	34	Basic Metal Industries.
	35	Manufacture of Metal Products except Machinery and Transport Equipment.
VIII	36	Manufacture of Machinery except Electrical Machinery.
IX	37	Manufacture of Electrical Machinery, Apparatus, Appliances and supplies.
	38	Manufacture of Transport Equipment.
X	39	Miscellaneous Manufacturing Industries.
	51	Electricity, Gas and Steam.

Current Production Data

Apart from the Annual Survey of Industries described above, data on monthly production are collected by various

organisations and authorities which have been charged with the regulation or development of some aspects of the industries concerned. The following table gives the name of the principal organisations and the industry for which they are responsible for collection of these data :

TABLE
Sources of Data on Monthly Production of
Selected Industries in India

<i>Industry</i>	<i>Sources</i>
1. Coal including Lignite	Coal Controller, Calcutta.
2. Minerals except Petroleum (but including gold)	Indian Bureau of Mines, Nagpur.
3. Sugar	Chief Director, Directorate of Sugar and Vanaspati, New Delhi.
4. Vegetable oil products (Vanaspati)	
5. Coffee	Indian Coffee Board, Bangalore.
6. Tea	Tea Board, Calcutta ; United Planter's Association of Southern India, Coonoor ; and Indian Tea Association, Calcutta.
7. Salt	Salt Commissioner, Jaipur.
8. Cotton and Wool Art Silk Fabrics Textile machinery	Textile Commissioner, Bombay.
9. Jute	
10. Jute machinery	Jute Commissioner, Calcutta.
11. Iron and Steel	Iron and Steel Controller, Calcutta.
12. Electricity	Central Water and Power Commission, (Power wing) New Delhi.
13. Petroleum products	Ministry of Petroleum and Chemicals, New Delhi.
14. Other Industries	Directorate General of Technical Development, New Delhi.

1. *Monthly Statistics of the Production of Selected Industries in India*

The monthly data on industrial production at present collected by the various agencies and published in the *Monthly Statistics of Production of Selected Industries in India* by the Industrial Statistics Wing, C.S.O. are largely confined to only production and stocks. The data relating to most of the industries are collected on a voluntary basis by the Development Wing of the Ministry of Commerce looking after the development of a specific industry or industries except in the case of coal, sugar, jute mill machinery, salt, cotton textiles, woollen textiles, iron and steel, and all minerals except petroleum and gold where the collecting agencies have statutory powers to call for returns.

A number of industries have been included in the publication from time to time, the total number being about 324 industries/industrial products at present. The industries are classified according to National Standard Industrial and Occupational Classifications. The number of units to which the current month's data relate are also given. Recent improvements are included in stock figures and state-wise production data. As the collection in case of most of the industries is on a voluntary basis, the utility of this publication is reduced to some extent due to (i) the coverage and scope have been limited to large units in the industry ; (ii) the percentage of response is not uniform from month to month ; (iii) the percentage of response in certain cases is very low; (iv) the quality of data is not uniform and in some cases is very poor ; and (v) the estimation of production figures in cases of defaulting units introduces arbitrary judgements.

2. *Indian Cotton Textile Industry*

The monthly statistical bulletin, *Indian Cotton Textile Industry*, published by the Textile Commissioner, Government of India was started from June 1955. It replaced the *Monthly Statistics of Cotton Spinning and Weaving in Indian Mills* and the monthly statistical bulletin issued for official use as *Cotton Cloth and Yarn Control in India*. The information is collected on a statutory basis from the units engaged in the manufacture of cotton, woollen and

and fabrics and textile machinery. The publication gives all-India as well as state-wise figures of production of cotton yarn according to counts, cloth according to various categories and varieties, figures of import and export, annual per capita availability of cloth, indigenous production of Textile Machinery and accessories, consumption and stock of cotton and cotton waste, labour employed, productivity, trade etc. An annual publication entitled *Annual Statistical Digest, Indian Textile Industry*, is issued each year giving annual figures together with the summary tables for a decade.

3. Jute Bulletin

The monthly *Jute Bulletin* published by the Indian Central Jute Committee, Calcutta gives data relating to jute trade and industry, statistics of production and stocks, consumption and export of jute goods, etc. The information is collected on a voluntary basis from the members of the Indian Jute Mills Association and hence it does not contain the data relating to the remaining units.

4. Monthly Coal Bulletin

The *Monthly Coal Bulletin* issued by the Chief Inspector of Mines, Ministry of Labour and Employment, Dhanbad, contains figures of production, despatches, and stocks of coal, employment, hours of work, productivity, wages, accidents, disputes, machinery installed and in operation etc. The data are collected under the provisions of the Indian Mines Act 1952, and the Rules framed thereunder, Coal Mines Regulations 1957 and the Mines Maternity Benefit Act, 1941.

Ad-hoc Surveys

We have so far discussed the present position of Industrial Statistics in India, covering the Census of Manufacturing Industries, Sample Survey of Manufacturing Industries and the Annual Survey of Industries. But all these efforts are not yet able to cover the vital sector of industrial production in Indian economy, known as the 'small enterprises sector'. This sector covers all manufacturing and processing activities, including and maintenance services, undertaken by household and small non-household factory units which are not

covered under the Factories Act, 1948. Thus it covers all manufacturing and servicing enterprises employing less than 10 workers and using power or employing less than 20 workers if not using power.

Although the 'small enterprises' sector is a very important sector from the point of view of employment as well income generation, there are no data available on employment, earnings, output, value added, cost structure etc. Only in some fields like the production of khadi and handloom, silk, and few village industries covered by the All-India Khadi Village Industries Commission, some attempts have been made to study the various problems of production and employment.

The 1961 Census of Population has, for the first time, thrown separate figures of employment in household industry for each industry by State and rural-urban breakdown. The census has also given a frame of all industrial establishments, big or small, belonging to household as well as non-household sectors.

The National Sample Survey has in its various rounds conducted some surveys on household industry. The data collected in the 7th to 10th and 14th rounds relate to total employment, productivity, value added, etc. The results of these surveys have been published in the NSS Reports, 19, 21, 42, 43 and 94 which are entitled '*Tables with Notes on Small Scale Manufacture—Rural and Urban, Household Enterprises Smaller than Registered Factories*'. One point worth noting in this connection is that these reports exclude from their purview all those non-household establishments which are not covered by the Factories Act, 1948, i.e. those run by co-operative societies, joint stock companies, public bodies, etc.

A number of surveys and studies have also been undertaken by various research institutions under the auspices of the Research Programmes Committee, Planning Commission, Government of India from time to time. These surveys have been of localised nature. However, some of the reports based on these surveys contain useful information on employment, output and earnings for such industries and areas as are covered by them.

The State Statistical Bureaus in some of the States e.g. West Bengal, Bombay, Assam, Bihar, Andhra Pradesh and Kerala have conducted sample surveys on small scale and

cottage industries in their respective States. However, the scope, coverage and reference period of these surveys vary from State to State.

The Small Industries Corporation, brings out its Annual reports which contains useful information on employment, and gross value of output for a large number of industries. The definition of small industries, in this case, is based on the capital employed instead of the average daily employment.

Lacunae in the present Industrial Statistics

From the above description of industrial statistics in India, it will be seen that the data on various aspects of production and employment in large industrial establishments, i.e. the sector covered by the Factories Act, 1948 are fairly complete and reliable. The only lacuna in this respect is of time lag. The data relating to the year 1965 were available only towards the end of 1967 and that too on a provisional basis. Attempts are being made to reduce the time-lag but there are certain inherent difficulties in doing so. After the completion of the calendar/financial year for which the data relate, it usually takes about a year to complete the field work. It is very desirable that this period is reduced considerably. Moreover, use of the electronic data processing equipment would also help in reducing the time-lag to a great extent.

Although some data are available on production and employment in the household sector from the various rounds of the NSS, no serial statistics covering household and non-household small industries sector are at present available.

Index Number of Industrial Production

The general aim of an index number of industrial production is to indicate changes over time in the volume of production of non-agricultural commodities. It measures at regular intervals the general movements in the volume of industrial output. Since the price concept is not involved in the index, it gives changes in the total output in real terms.

*** Index of Industrial Production (old series)**

The first official index of industrial production was com-

puted by the Office of the Economic Adviser, Ministry of Commerce and Industry, with the year 1937 as base. It covered manufacturing, mining and electricity undertakings and comprised 15 industries, *viz.*, cotton textiles, jute manufactures, iron and steel, chemicals, paper and paper board, cement, matches, paints, wheat flour, distilleries and breweries, sugar, petrol, kerosene, coal and electricity. The index covered 90 per cent of the total production in these industries. The basis of comparison was the quantity produced. As no census of production or manufactures was conducted, the weights were allotted according to the total value of the gross output during the base year. It is worth noting that cotton textiles had the highest weight of 42, followed by jute manufactures which had a weight of 18 and sugar a weight of 10, iron and steel had a weight of 8 while the remaining industries had weights less than 5. Weighted arithmetic average with fixed base was employed for the purpose of compilation of index numbers. Adjustments for seasonal variations were made by the technique of averaging the monthly ratios of original data to a 12 month moving average during a representative period. This index was discontinued from 1949 consequent on the transfer of work relating to the compilation of monthly production statistics to the Director of Industrial Statistics located then at Simla.

Interim Index of Industrial Production (new series)

The new series of the interim index of industrial production was started from January 1949 covering mining and manufacturing, comprising 20 items, *viz.*, coal, sugar, cotton textiles, jute textiles, woollen textiles, plywood, paper and paper board, bleaching powder, paints and varnishes, matches, glass and glass-ware, cement, refractories, pig-iron and ferro-alloys, copper (virgin metal), sewing machines, electrical machines, apparatus, appliances and supplies, electric lamps, electric fans and bicycles. The year 1946 was adopted as base. In computing this index number the value added by manufacture which was obtained from the first Census of Manufactures was taken to determine the weights for different industries. The share of cotton textiles in the weights for this index number was 43.5 while that of jute textiles was 16.5 ; coal got a share of 12.0 while the share of sugar went down to 3.5 ; other industries had

a nominal share which was less than 5 per cent except for manufacture of electrical machines, etc., which was 5·1 per cent. In the case of coal, in the absence of any estimate of value added, the gross ex-factory value at the pit-head of the coal mines was taken as an estimate of the value added. The value added by manufacture was used in preference to the gross ex-factory value of output as the basis of weighting as the former was taken to represent more accurately the effort put forth and the value created by the industry during the period.

The index was computed as single weighted arithmetic mean given by the formula,

$$I^* = \frac{\sum R_m W_m}{\sum W_m} \times 100,$$

where R_m = production relative for the industry for the month, and

W_m = the weight allotted to the industry.

The index was adjusted for variation in the number of days in the month for all industries, except sugar, by the formula :

$$R_m = \frac{R'_m \times \text{average number of days of a month in a year}}{\text{Calendar number of days in the month}}$$

where R_m and R'_m are the adjusted and unadjusted production relatives for the month.

The index for sugar was adjusted for seasonal variation by computing monthly production relatives based on production in the corresponding month of the base year and by further adjusting the weights for the industry from month to month according to the seasonal pattern in the base year. The adjusted weight for the month was computed by the formula

$$W_m = \frac{P_m}{A_m} \times 3.54,$$

where W_m = the adjusted weight,

P_m = the production in the corresponding month of the base year,

A_m = the average monthly production in the base year, and 3·54 is the weight given

*This is a familiar base weighted (Laspeyre's) form :

$$I_{01} = \frac{\sum p_0 q_1}{\sum p_0 q_0} = \frac{\sum p_0 q_0 \frac{q_1}{q_0}}{\sum p_0 q_0} = \frac{\sum W_m R_m}{\sum W_m}$$

to the sugar industry in the overall weighting diagram.

The adjusted weight varied from month to month being higher in the working season than during the off-season. During the 8 months, April to November, the weights were less than 3.54, while during December to March, the weight exceeded 3.54. The deficit or excess of monthly weights over the average weight (for the whole year) was distributed on a pro-rata basis among the other industries. This procedure was defective for a number of reasons. The procedure did not take into account (a) the shift in the seasonal pattern in any year compared to the base year and (b) the production in months like July and August which were given zero weights. This procedure of seasonal adjustment brought about violent fluctuations in the general index number of industrial production. This was one of the major weaknesses of this index number. In view of these shortcomings, the interim index was discontinued from April 1956, and was replaced by the 'revised index of industrial production.'

Revised Index of Industrial Production

The revised index of industrial production was computed with the year 1951 as base and it included 88 items covering the production of mining, manufacturing and electricity undertakings. The publication of this series started from the October 1955 issue of the *Monthly Statistics of the Production of Selected Industries in India*. The items covered in the series were classified according to the International Standard Industrial Classification of all Economic Activities (ISIC).

The calendar year 1951 was adopted as a base year on the recommendations made by the Working Party on Base Periods of Official Index Numbers appointed by the Standing Committee of Department Statisticians of the Government of India. In recommending 1951 as base year, various considerations such as the new post-war norms assumed by the industries and commencement of the First Five-Year Plan weighed heavily with the Working Party.

As in the case of Interim Index Number, value added by manufacture as obtained from the Census of Manufactures for the calendar year 1951 was used for assigning weights to the industries covered by the census. As the scope of the

of Manufactures was limited to 29 industries only and to establishments employing 20 or more workers and using power, estimates of value added for industries not covered by the census were made on the basis of data collected by other agencies and organisations. In the case of cotton textiles, paints and varnishes, matches, soap, etc., the census estimate of value added by manufacture in 1951 has been increased in proportion to the excess over the census estimate of the quantity produced. For a number of other industries like tea, cigarettes, rubber products, chemical products, metal products etc. not covered by the census, the estimates of proportion of value added by manufacture to the gross value of output available in the Sample Survey of Manufacturing Industries 1950 or 1951 have been used. For coal and salt, the proportion has been determined from the particulars sent by two important concerns and the Salt Commissioner, respectively. For iron ore, the gross value of output in 1951 has been taken as the value added by manufacture since the value of input is negligible. In the case of gold, the estimate is based on the information supplied by the Kolar Gold Fields and Department of Finance, Hyderabad, while in the case of electricity generated the estimate is given by the Central Water and Power Commission. The weights determined on the basis of values added by manufacture are distributed to the sub-items in proportion to their gross values.

The index is a simple weighted arithmetic average calculated in the same manner as for the Interim Index of Industrial Production, the formula being :

$$I = \frac{\sum R_m W_m}{\sum W_m} \times 100$$

Up to October 1958, the indices for all industries, except tea, sugar and salt, were adjusted for variations in the number of days from month to month. Adjustments for seasonal variations were also made in case of sugar, salt and tea by using seasonal indices computed by the method of moving averages, based on data for a period of 14 years in the case of sugar and 6 years each in the case of salt and tea. Since this procedure of adjusting the index for seasonal variations was found to cause violent fluctuations in the general index, particularly due to sugar, the index number came under a good deal of criticism and adverse comments.

On the recommendations of Working Group appointed by the Central Statistical Organisation to examine the question of seasonal adjustment, the Directorate of Industrial Statistics introduced certain changes in the revised index from November, 1958. The procedure of adjusting the index for the variation in the number of days in the month and for seasonal variations in respect of sugar, salt and tea was discontinued. A revised procedure of adjusting the overall index for seasonal variations was evolved and was put into practice from November, 1958.

As the above index with 1951 as base could not adequately represent the recent industrial growth because of (a) remoteness of base year, (b) the weighting pattern based on data for that year, and (c) rapid development of several new items of production in recent years, a Working Group was set up to study and recommend the lines of its revision. Based on the recommendations of the Working Group, the index of industrial production was revised with 1956 as base replacing the earlier index with 1951 as base as from the July, 1962 issue of the *Monthly Statistics of the Production of Selected Industries of India*.

Index of Industrial Production with 1956 as Base

The revised index of industrial production, with calendar year 1956 as base, covered as many as 201 items of production as compared to 88 items in the earlier index. The increase was not entirely due to the inclusion of new items ; some items included in the previous index were sub-divided into sub-items. The items of this index are classified according to the '*National Classification of All Economic Activities*', published by the C.S.O.

Weights were allotted to different items in proportion to the value added by manufacture in 1956, which was obtained from the Census of Manufactures, 1956. In case of a number of major groups and items like manufacture of wood and cork, except manufacture of furniture, and paper and paper boards, wheat flour, biscuits, sugar, confectionery, vanaspati, woollen textiles, paints, varnishes and lacquers, soap, glass and glass products, cement, electric appliances, bicycles, etc., a suitable proportion of value added by manufacture to gross value of output was determined for each of the items from the Census of Manufactures, 1956. The value added by manufacture for these major groups and items was then estimated by multiplying

their gross value of output in 1956, as supplied by the Ministry of Commerce and Industry, by this proportion. In case of another set of industries, the proportion of value added to gross value of output was ascertained either from the Report on the Sample Survey of Manufacturing Industries, 1953, or from the Report on Sample Survey of Manufacturing Industries, 1956—Survey of Scheduled Industries. The gross value of output in 1956, for each of the items was multiplied by the appropriate proportion calculated from the SSMI Reports. The product was taken as an estimate of the value added by manufacture. Various other sources were used in order to arrive at the value added by manufacture for a number of industries like iron ore, gold, coal, tea, coffee, salt, cotton textiles (mill sector), matches, and electricity, etc. The items or sub-items whose value added could not be estimated were weighted in proportion of their gross value of output.

The total value added in 1956 by all the 201 items included in the revised index with 1956 as base stood at Rs. 736 crores. The total value added by 88 items of the earlier index with base 1951 was Rs. 448 crores in 1951 and Rs. 573 crores in 1956. The value added in 1956 by the items of the revised index and by the items of the earlier index worked out to be 90 per cent and 70 per cent respectively of the net output of factory establishments and mining sector in India during 1956-57. The value added in 1951 by the items of the earlier index with base 1951 worked out to be 92 per cent of the net output of factory establishments and mining sector in India during 1951-52.¹

Index. As in the earlier series, the index is a simple weighted arithmetic mean calculated by the formula :

$$I = \frac{\sum R_i W_i}{\sum W_i} \times 100,$$

where I is the index in question, R_i is the production relative for the item i for the month in question, and W_i the weight allotted to it.

Adjustment for Seasonal Variation. The index was calculated for each month from January, 1951 to December 1961 by the method explained above. The series of indices thus

¹. C.S.O., *The Monthly Statistics of the Production of Selected Industries in India*, December, 1964, p. 164.

obtained was used in computing seasonal indices by the method of moving averages.

The computed seasonal indices are shown below :

TABLE

<i>Month</i>	January	February	March	April	May	June	July
Seasonal index	101·38	97·48	101·08	98·70	98·88	97·38	102·13
<i>Month</i>	August	September	October	November	December		
Seasonal index	101·42	100·55	99·07	97·90	104·03		

The general index of every month was adjusted for seasonal variation by using the above indices. Unlike the earlier indices, no adjustment was made in the revised index for the variation in the number of days of the month. Also instead of adjusting for seasonal variations for sugar, salt and tea only, the revised index was adjusted on the basis of overall seasonal indices.

At the end of each year the seasonal indices mentioned above were revised covering that year also when all the final production figures had been received. The seasonal indices thus revised were employed for seasonal adjustment of the monthly indices published.

The question of revising the base period of the index of industrial production in order to reflect adequately the industrial growth and also to have a common base period for the various official indices was under the consideration of the CSO and the concerned Ministries for quite some time. In fact, the Central Technical Advisory Council on Statistics at its second meeting held at Hyderabad in October, 1962, recommended that "the last year of the Second Plan or if that was not considered suitable in any particular case, some other year as close as possible to the last year of the Second Plan might be adopted as the base for each index and that the choice of the base might be made in each case by the CSO in consultation with the concerned operational agencies." The base of the index in the present revision has accordingly been shifted to 1960. An *ad hoc* Working Group was set up in 1965 to study and recommend the lines of this revision. The present Index of Industrial Production has been revised according to the recommendations of this Working Group.

Index of Industrial Production with 1960 as Base

Coverage. The current index of industrial production is based on regular monthly series of 324 items of production as compared to 201 items in the earlier index (base 1956=100). In addition to the above monthly series, a special annual index covering 449 items with 125 additional items for which monthly data are not available is also compiled and published separately. The items of the index are classified according to the *Standard Indian Industrial and Occupational Classification*. The index does not include "construction" industry.

Basis of Allocation of Weights. Weights have been allotted on the basis of value added by manufacture to different items at three-digit level of industrial classification, according to Annual Survey of Industries, 1960, covering both the census and sample sectors, with necessary adjustments for non-response in the census sector, or on the basis of gross value of output where the former is not available.

In the case of cotton textiles, the value added by manufacture for yarn and cloth has been computed for weighting purposes on the following basis :

"The value added per unit of yarn manufactured in spinning mills was computed and applied to total production of yarn at spindle point. The value added thus arrived at for yarn was then subtracted from the total value added for cotton textile industry to obtain value added for cloth. Due to non-availability of 1960 ASI returns (since old returns are periodically destroyed), the value added per unit of yarn was made on the basis of 1961 returns and adjusted for price changes in 1961 over 1960, computed from the average ex-factory net selling price of the two years."

For mining, the value added is estimated by the Indian Bureau of Mines after excluding the value added for gold and salt. In case of electricity, the estimate of value added is based on data published by the Central Water and Power Commission (Power Wing).

The number of items and their weights by divisions and major groups of industry for the earlier and the present indices are shown in the table on next page 137. From this table it may be seen that the relative positions of various industry-groups have

TABLE

Division	Code Number	Major Group	Earlier Index (1956-100)		Revised index (1960-100)	
			No. of items	Weights	Monthly series	Annual series
1. Mining and quarrying						
2-3 Manufacturing	20-21	Food manufacturing industries	2	7.47	35	35
	22	Beverages and tobacco industries	198	88.85	288	413
	23	Manufacture of textiles	8	13.99	8	15
	24	Manufacture of footwear, other wearing apparel and made-up textile goods	1	1.49	2	2
	25	Manufacture of wood and cork except manufacture of furniture	19	41.76	19	20
	26	Manufacture of furniture and fixtures	4	0.24	6	6
	27	Manufacture of paper products	4	1.39	...	1
	29	Manufacture of leather and fur products except footwear and other wearing apparel	3	0.18	5	5
	30	Manufacture of rubber products	24	3.04	26	26
	31	Manufacture of chemicals and chemical products	45	3.58	83	138
	32	Manufacture of products of petroleum and coal	1	3.79	1	9
	33	Manufacture of non-metallic mineral products except products of petroleum and coal	14	2.47	16	16
	34	Basic metal industries	23	9.25	26	27
	35	Manufacture of metal products except machinery and transport equipment	13	0.99	15	18
	36	Manufacture of machinery except electrical machinery	15	1.10	43	71
	37	Manufacture of electrical machinery, apparatus, appliances and supplies	14	2.41	17	21
	38	Manufacture of transport equipment	7	2.86	8	15
	39	Miscellaneous manufacture industries	1	0.03	5	14
5. Electricity		Electricity	1	3.68	1	1
	Total		201	100.00	324	449
						100.00

undergone significant changes. The weights of textile industry, although still the highest, have substantially declined from 41.76 in the index with 1956=100 to 27.06 in the revised index. Food Group still remains second, although, in this case also there is a decrease in the magnitude of the weights. Chemical and chemical products, transport equipment, metal products, machinery (other than electrical machinery) etc., have gained considerable importance. This reflects structural changes in Indian industries and in their relative position brought about by planning and large scale developmental programmes.

Computation of the Index. As in the earlier series, the index is a simple weighted arithmetic mean calculated by the formula :

$$I = \frac{\sum R_i W_i}{\sum W_i} \times 100$$

Seasonal Adjustment. The "crude annual index" is the index without any adjustment for seasonality, i.e., it is the weighted average of relatives of annual production figures. The crude monthly general index is adjusted for seasonality by appropriate seasonal indices calculated by using the method of moving average similar to the one used in the index with 1956 as base. Twelve months moving average was calculated over crude monthly general index for the years (a) 1960 to 1965 in the first instance, and (b) thereafter 1960 to 1966. The seasonal indices applied to correct seasonality are shown below :

TABLE

Month	January	February	March	April	May	June	July
Seasonal index	102.51	97.68	104.29	97.72	97.71	97.73	101.00
Month	August	September	October	November	December		
Seasonal index	100.70	99.21	96.11	99.96	105.38		

The general index of every month for the period up to 1965 is adjusted for seasonal variation by using the indices obtained in (a) and for the period 1966 and onward by using the indices obtained in (b). The above Table relates to (b).

At the end of each year, the seasonal indices are revised covering the year ended when all final production figures are received. The seasonal indices thus revised are employed for seasonal adjustment of the monthly indices published subsequently.

In spite of many changes and improvements made from time to time in the scope, coverage, base year, weighting diagram, techniques and procedures for adjustments in seasonal variation, etc. the current index suffers from several limitations. The weighting diagram is based on the information obtained from wide variety of sources which do not give data of a uniform quality. The information in case of most of the industries is collected from large-scale units licensed under the Industries (Development and Regulations) Act, 1951, *i.e.*, employing 50 or more workers and using power or employing 100 or more workers and not using power. It leaves out a very large and substantial portion of industrial production from the scope of the index. Moreover, when no return is received from any unit expected to submit the return, the production for that unit is estimated.

APPENDIX I

**List of 63 Industries covered by the "Sample Survey of
Manufacturing Industries**

1. Wheat flour.
 2. Rice milling.
 3. Biscuit making (including bakeries and confectioneries).
 4. Fruit and vegetable processing.
 5. Sugar.
 6. Distilleries and breweries (including power alcohol manufacturing).
 7. Starch.
 8. Vegetable oils-oilseed crushing, and extraction and processing of vegetable oils.
 9. Paints and varnishes.
 10. Soap.
 11. Tanning.
 12. Cement.
 13. Glass and glassware.
 14. Ceramics.
 15. Plywood and tea-chests.
 16. Paper and paper board (including strawboard).
 17. Matches.
 18. Cotton textiles-spinning and weaving.
 19. Wollen textiles.
 20. Jute textiles.
 21. Chemicals including drugs and pharmaceuticals.
 22. Aluminium, copper and brass-all processes from ore smelting to manufacture of final products ready for use.
 23. Iron and steel - smelting (including blast furnace operations), rolling and rerolling.
 24. Bicycles.
 25. Sewing machines
 26. Producer gas plants.
 27. Electric lamps.
 28. Electric fans.
 29. General engineering and electrical engineering (including generation and transformation of electrical energy).
 30. Footwear and leather manufactures.
 31. Rubber and rubber manufactures (including rubber substitutes).
 32. Enamelware.
 33. Hume pipes and other cement and concrete products (including reinforced products).
 34. Asbestos and asbestos cement products.
 35. Bricks, tiles, lime and *sarkhi* manufacturing.
 36. Lac.
 37. Turpentine and resin.
- Plastics (including manufacture of gramophone records).

39. Petroleum refining.
40. Saw milling.
41. Wood ware (including furniture manufacturing).
42. Tea manufacturing.
43. Tobacco products.
44. Groundnut decorticating, cashew nut processing and *dal* manufacturing.
45. Printing (including lithographing) and bookbinding.
46. Webbing, narrow fabrics, embroidery and lace manufacturing.
47. Hosiery and other knitted goods.
48. Thread and thread ball making.
49. Textiles, dyeing, bleaching, finishing, and processing (including mercerizing, finishing, calendering, glazing, proofing, etc.).
50. Clothing and tailoring.
51. Cotton ginning and pressing.
52. Rope making.
53. Silk and artificial silk.
54. Jute pressing.
55. Electricity generation and transformation.
56. Automobile and coach building.
57. Ship building and ship repairs (including shipyards and dockyards).
58. Railway workshops, repairs, shops and locomotive shops.
59. Arms, ammunitions and explosives.
60. Aircraft assembling, repairs and servicing.
61. Railway wagon manufacturing.
62. Textile manufacturing (bobbins, shuttles, healds, reeds, pickers, etc.).
63. Unspecified industries.

[Source: Central Statistical Organisation, "Eleventh Census of Indian Manufactures, 1956, Delhi, Manager of Publications, 1959, pp. 474 f.].

APPENDIX II

Classification of Scheduled Industries as per Industries (Development and Regulation) Act, 1951 vis-a-vis Industries Amendment Act of 1956

- I. List of scheduled industries common to both old and new classifications.*
1. Coal, lignite, coke and other derivatives.
 2. Mineral oil (crude oil), motor and aviation spirit, diesel oil, kerosene oil, fuel oil, diverse hydrocarbon oils, and other blends including synthetic fuels, lubricating oils, and the like.
 3. Internal combustion engine.
 4. Equipment for generation, transmission and distribution of electricity including transformers.
 5. Electric motors.
 6. Electric fans.
 7. Electric lamps.
 8. Radio receivers including amplifying and public address equipment.
 9. Aircraft.
 10. Ships and other vessel drawn by power Railway.
 11. Locomotives.
 12. Railway rolling stock.
 13. Automobiles—motor cars, buses, trucks, motor cycles, scooters and the like.
 14. Bicycles.
 15. Power-driven pump—reciprocating, centrifugal and the like.
 16. Ball, roller and tapered bearings.
 17. Machine tools.
 18. Tractors, harvesters, and the like.
 19. Agricultural implements.
 20. Hurricane lanterns.
 21. Scientific instruments.
 22. Mathematical, surveying and drawing instruments.
 23. Dye-stuffs.
 24. Pharmaceuticals and drugs.

Textiles :

25. Made wholly or in part of cotton, including cotton yarn, hosiery and rope.
26. Made wholly or in part of jute, including jute yarn, twine and rope.
27. Made wholly or in part of wool, including wool tops, woollen yarn, hosiery carpets and druggets.
28. Made wholly or in part of silk, including silk yarn and hosiery.
29. Made wholly or in part of synthetic artificial (man-made) fibres, including yarn and hosiery of such fibres.
30. Sugar.
31. Vegetable oils, including solvent extracted oils.
32. Vanaspati.
33. Soap.

34. Leather, leather goods, and pickers.
35. Glue and gelatine.
36. Portland cement.
37. Plywood.
38. Arms and ammunition.

II. List of scheduled industries as per old classification sub-divided into two or more new classifications.

	<i>Old classification</i>
39. Iron and steel (metal).	Iron and steel
40. Iron and steel castings and forging.	
41. Iron and steel structurals.	
42. Iron and steel pipes.	
43. Special steels.	
44. Other products of iron and steel.	
45. Non-ferrous metals and alloys.	Non-ferrous metals including alloys (and semi-manufactures thereof.)
46. Semi-manufactures and manufactures.	
47. Boilers and steam generating plants	Machinery used in industry including boilers and steam generating equipment.
48. Steam engines and turbines.	
49. Textile machines (such as spinning frames, carding machines, power looms, and the like).	
50. Jute machinery.	
51. Rayon machinery.	
52. Sugar machinery.	
53. Tea machinery.	
54. Mining machinery.	
55. Metallurgical machinery.	
56. Cement machinery.	
57. Chemical machinery.	
58. Pharmaceutical machinery.	
59. Paper machinery.	
60. Size-reduction equipment-crushers, ball mills and the like.	
61. Conveying equipment—bucket elevators, skip horsts, cranes, derricks, and the like.	
62. Size separation units—screens, classifiers, and the like.	
63. Mixers and reactors—Kneading mills, turbo mixtures, and the like.	
64. Filtration equipment—filter presses, rotary filters, and the like.	
65. Centrifugal machines.	
66. Evaporators.	
67. Distillation equipment.	

68. Crystallisers.	
69. Driers.	<i>continued</i>
70. Air and gas compressors and vacuum pipes (excluding electrical furnaces).	
71. Refrigeration plants for industrial use.	
72. Fire-fighting equipment and appliances including fire engines.	
73. Speed reduction units.	
74. Grinding wheels and abrasives.	
75. Storage batteries.	Batteries, dry cells and storage
76. Dry cells.	
77. Telephones.	Telephones, Telegraph apparatus and wireless communication apparatus
78. Telegraph equipments.	
79. Wireless communication apparatus.	
80. Others, such as fork lift trucks, and the like.	Automobiles.
81. Inorganic fertilizers.	Heavy chemicals including fertilizers.
82. Organic fertilizers.	
83. Mixed fertilizers.	
84. Inorganic heavy chemicals.	
85. Organic heavy chemicals.	
86. Coke oven by-products.	Coals including coke and other derivations.
87. Coal tar distillation products and the like, naphthalene anthracene and the like.	
88. Paper-writing, printing and wrapping.	Paper including newsprint (paper board and straw board).
89. Newsprint.	
90. Paper board and straw board.	
91. Paper for packaging (corrugated paper, kraft paper, paper bags, paper containers and the like).	
92. Pulp—wood pulp, mechanical, chemical including dissolving pulp.	
93. Alcohol.	Power and industrial alcohol.
94. Other products of fermentation industries.	
95. Glycerine.	Other toilet requisites.
96. Cosmetics.	
97. Perfumery.	
98. Toilet preparations.	
99. Tyres and tubes.	Rubber goods.

- 100. Surgical and medicinal products including prophylactics.
- 101. Footwear.
- 102. Other rubber goods.

(continued)

- 103. Hollow-ware.
- 104. Sheet and plate glass.
- 105. Optical glass.
- 106. Glass wool.
- 107. Laboratory wares.
- 108. Miscellaneous wares.
- 109. Fire bricks.
- 110. Refractories.
- 111. Furnace lining bricks—acidic, basic and neutral.
- 112. China ware and pottery.
- 113. Sanitary wares.
- 114. Insulators.
- 115. Tiles.

Glass & Ceramics

- III. List of scheduled industries newly added in the classification.*
- 116. Fuel gases—(Coal gas, natural gas, and the like).
 - 117. Electrical furnaces.
 - 118. Electrical cables and wires.
 - 119. X-ray equipment.
 - 120. Electronic equipment.
 - 121. Household appliances such as electric irons, heater, and the like.
 - 122. Television sets.
 - 123. Teleprinter.
 - 124. Plastic moulded goods.
 - 125. Razor blades.
 - 126. Typewriters.
 - 127. Calculating machines.
 - 128. Air conditioners and refrigerators.
 - 129. Vacuum cleaners.
 - 130. Surgical instruments—sterilizers, incubators, and the like.
 - 131. Water metres, steam metres, electrical metres, and the like.
 - 132. Indicating, recording and regulating devices for pressure, temperature, rate of flow, weights, levels, and the like.
 - 133. Weighing machines.
 - 134. Fine chemicals including photographic chemicals.
 - 135. Synthetic resins and plastics.
 - 136. Paints, varnishes and enamels.
 - 137. Synthetic rubbers.
 - 138. Man-made fibres including regenerated cellulose rayon, nylon, and the like.
 - 139. Explosives including gunpowder and safety fuses.
 - 140. Insecticides, fungicides, weedicides, and the like.

- 141. Textile auxiliaries.
- 142. Sizing materials including starch.
- 143. Miscellaneous chemicals.
- 144. Cinema films.
- 145. Photographic amateur film.
- 146. Photographic printing paper.
- 147. Canned fruits and fruit products.
- 148. Milk foods.
- 149. Malted foods.
- 150. Flour.
- 151. Other processed foods.
- 152. Asbestos cement.
- 153. Insulating boards
- 154. Gypsum boards, wall boards and the like.
- 155. Hard board, including fibre board, chip board, and the like.
- 156. Matches
- 157. Miscellaneous (furniture components, bobbins, shuttles, and the like).
- 158. Cigarettes.

IV. List of remaining scheduled industries which have undergone change in their nomenclature in the new classification.

- 159. Ferro alloys.
- 160. Bulldozers, dumpers, scrapers, loaders, shovels, drag lines, bucket wheel excavators, road rollers, and the like.
- 161. Hand tools, small tools, and the like.
- 162. Sewing and knitting machines.

APPENDIX III

**Facsimile of the questionnaire used in the Annual
Survey of Industries, 1967**

(I) Identification Particulars and Classificatory Characteristics**(I.I) Identification particulars and classificatory characteristics**

1. Industry
2. State
3. District
4. Location (Urban-1 Rural-2)
5. Permanent Serial No.
6. S.S.I. Serial No.
7. Factory Serial No.
8. Scheme
9. Stratum
10. Sub-sample
11. Sample Unit No.
12. Type of power used
13. *Year of establishment
14. *Share of non-national
15. *Capital size
16. *Employment size
17. *Type of ownership and organization
18. *Type of management

*To be filled by tabulation unit.

(I.2) Particulars of field operations

<i>Assistant Superintendent</i>	<i>Superintendent</i>
1. Verification	10. Receipt from the factory
2. Compilation	11. Passed for verification
3. Submission	12. Final scrutiny
4. Response from factory	13. Despatch
5. Factory's ability to complete (code)	14. Name
6. Suitability of records (code)	15. Signature
7. Accounts maintained in (lan- guage)	Remarks, if any :
8. Name	
9. Signature	
Remarks, if any :	

(1.3) Identification and Summary information

1. Industry code	12. All workers (no.)
2. State code	13. All employees (no.)
3. Permanent Sl. No.	14. Wages to workers (Rs.)
4. Factory Sl. No.	15. Total emoluments (Rs.)
5. Scheme	16. Fuels, etc. consumed (Rs.)
6. Stratum	17. Materials consumed (Rs.)
7. Sub-sample	18. Total input (Rs.)
8. S U. no.	19. Products (Rs.)
9. Fixed capital closing (Rs.)	20. Total output (Rs.)
10. Working capital closing (Rs.)	21. Depreciation (Rs.)
11. Invested capital closing (Rs.)	

(2) Details of operation

1.* Perennial/seasonal	5. Year of establishment at present site
2.* If seasonal, normal season in months	6. Accounts closed on
3.* Months of operation during the a/c year	7. Share of non-national (%)
4. Year of initial production	8.* Type of ownership & organisation
	9.* Type of management

* Entries against these items are to be made in terms of code nos. laid down in paragraph no. 7 of the memorandum.

(3) Power equipment as at the end of accounting year

Sl. No.	Item	No.	B.H.P.	B.H.P. as stand by
(0)	(1)	(2)	(3)	(4)
1.	Prime mover directly applied to machine			
2.	Electric motors			
3.	Total	x		
4.	Connected load (kw)			

(4) Details of addition etc. to inventory and other capital transactions during the accounting year from...to...

Sl. No.	Item	Net opening balance (Rs.) as on...	Value of additions etc. during the accounting year (Rs.)	Sold or discarded during the accounting year (Rs.)	Deprecia- tion during the account- ing year (Rs.)	Net closing balance (Rs.) as on...	rent paid (Rs.)
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Land		x	x			
2.	Improvement to land and other constructions						
3.	Building						
4.	Plant and machinery						
5.	Tools, transport equip- ment & other fixed assets						
6.	Assets under construc- tion/installation, not in- cluded in items 1 to 5			x	x	x	x
7.	Assets at head office allo- cable to the factory, not included in items 1 to 6					x	x
8.	Total (1 to 7)						
9.	Advance payments made during the year for fixed assets not received till the end of the accounting year (Rs.)						
10.	Total value of fixed assets received during the year minus advance payments for them made till the beginning of account- ing year (Rs.)						
11.	Gross value of fixed assets						
12.	as at the end of the accounting year (Rs.)						
13.	Others						
	total						

(4.A) Outstanding loans as at the end of the accounting year

<i>Sl. No.</i>	<i>Item</i>	<i>Amount Rs.</i>
(0)	(1)	(2)
1.	Ind -Fin.-Corporation	
2.	Industrial development bank.	
3.	Ind. credit and Investment corporation.	
4.	State Bank and its subsidiaries.	
5.	National industrial development corporation.	
6.	State financial corporation.	
7.	State Government.	
8.	Co-operative bank.	
9.	Other banks.	
10.	Others.	
11.	Loans through head office.	
12.	Total (1 to 11).	

(5) Inventory of working capital

<i>Sl. No.</i>	<i>Item</i>	<i>Opening balance Rs.</i>	<i>Closing balance Rs.</i>
(0)	(1)	(2)	(3)
1.	Materials, stores, fuels, etc.		
2.	Semi-finished goods incl. in process.		
3.	Products and by products.		
4.	Sub-total (1+2+3) physical working capital.		
5.	Cash in hand and at bank.		
6.	Amounts receivable.		
7.	Amounts payable.		
8.	Net balance (6 minus 7).		
9.	Total (4+7+8).		

(6) Installed capacity of production

<i>Sl. No.</i>	<i>Product* (1))</i>	<i>Unit (2)</i>	<i>Capacity during the year (3)</i>	<i>Basis of esti- mation (4)</i>	<i>Expected additional production (5)</i>	<i>Reasons Code** (6)</i>
(0)	(1))	(2)	(3)	(4)	(5)	(6)
1.						
2.						
3.						
4.						
5.						
6.						
7.						

* Attach extra sheet, if necessary.

** Entries in this column are to be made in code nos. as laid down in paragraph 11(7) of the memorandum.

(7) Details of Working

<i>Sl. No.</i>	<i>Item</i>	<i>No.</i>
1. Number of working days	Manufacturing.	
2.	Repair and maintenance.	
3.	Total (1+2).	
4. Total number of shifts.		
5. Shifts per day (0·0).		
6. Length of shift (hrs. 0.0).		

(8) Average employment and emoluments during the accounting year

<i>Sl. No.</i>	<i>Item</i>	<i>Man-hours average worked number per working day</i>	<i>salaries, bonus, etc. Rs.</i>
(0)	(1)	(2)	(3)
1.			
2.			
3. Workers employed directly	Men. Women. Children. Sub-total 1 (1 to 3).		
4.			

(Table Continued)

(0)	(1)	(2)	(3)	(4)
5.	Workers employed through contracts.			
6.	Total 1 (4+5).	x		
7.	Supervisory and managerial staff.	x		
8.	Other employees.	x		
9.	Head office staff allocable to the factory, not included in items 1 to 8.	x	x	
10.	Total 2 (6 to 9).			
11.	Working proprietors.	x		x
12.	Unpaid family workers.	x		x
13.	Imputed value of benefits (individual as well as group) in kind.			
14.	Total 3 (10+13).			
15.	Employer's contribution to provident fund, pension, gratuity, other charges, etc.			
16.	Total 4 (14+15).			

(9) Fuel and lubricant consumed (excluding intermediate products) during the accounting year

Sl. No.	Item	Unit	Quantity	Value Rs.
(0)	(1)	(2)	(3)	(4)
1.	Coal.	metric tonne		
2.	Coke.	metric tonne		
3.	Coal gas.	cubic metre		
4.	Fire wood.	metric tonne		
5.	Charcoal.	metric tonne		
6.	Motor spirit.	litre		
7.	Naptha.	litre		
8.	High speed diesel oil.	litre		
9.	Light diesel oil.	litre		
10.	Furnace oil.	litre		
11.	Kerosene oil.	litre		
12.	Other fuel oils.	litre		
13.	Lubricating oil.	litre		
14.	Electricity purchased.	kwh		
15.	Water purchased.	100 litre		
16.	Others.	x		x
17.	Total (1 to 16).	x		x

(10) Materials consumed for repair and maintenance, work done by other concerns and purchase value of good sold in the same condition as purchaseds

<i>Sl. No.</i>	<i>Item</i>	<i>Amount Rs.</i>
(0)	(1)	(2)
<i>Material consumed for repair and maintenance :</i>		
<i>Specify important items :</i>		
1.		
2.		
3.		
4. Others.		
5. Sub-total I (1 to 4).		
<i>Work done by other concerns :</i>		
6. Repair and maintenance.		
<i>Manufacturing process (describe) :</i>		
7.		
8.		
9. Others.		
10. Sub-total 2 (6 to 9).		
11. Products reported for sale in last year's return and used for further manufacture during the accounting year.		
12. Purchase value of goods sold in the same condition as purchased.		
13. Total (5+10+11+12).		

(11) Expenses not included in blocks (9), (10) and (13)

<i>Sl. No.</i>	<i>Item</i>	<i>Amount Rs.</i>
(0)	(1)	(2)
1. Inward transport charges.		
2. Purchase agency service.		
3. Taxes and duties on purchases.		
4. Postal services other than telephone.		
5. Telephone charges excluding rent.		
6. Stationery and printing.		

(Table Continued)

(0)	(1)	(2)
7.	Head office expenses allocable to factory, not included in any input block.	
8.	Sub-total 1 (1 to 7).	
9.	Audit fee, account and bank charges.	
10.	Local rates and factory licence.	
11.	Other services.	
12.	Sub-total 2 (9 to 11).	
13.	Managing agents' remuneration and office allowance.	
14.	Directors' fee.	
15.	Sub-total 3 (13+14).	
16.	Total (8+12+15).	
17.	Interest paid.	

(12) Output other than those reported in block (14)

Sl. No.	Item	Amount Rs.
(0)	(1)	(2)

1. Electricity produced and sold.*

Work done for other concerns :

2. Repair and maintenance.

Manufacturing process (describe) :

- 3.

- 4.

5. Others.

6. Sub-total 1 (2 to 5).

Value of semi-finished goods :

7. At the end of the accounting year.

8. At the beginning of the accounting year.

9. Net balance (7 minus 8).

10. Sale value of goods sold in the same condition as purchased.

11. Total (1+6+9+10).

12. Quantity of electricity produced (kwh).*

13. Quantity of electricity produced and sold (kwh)*

* Not applicable to industry no. 511.

(13) : Materials consumed (excluding intermediate products)
during the year

<i>Sl. no.</i>	<i>Name of materials*</i>	<i>Unit**</i>	<i>Consumed</i>	
(0)	(1)	(2)	<i>Quantity</i>	<i>Value (Rs.)</i>
Basic materials :				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.	Others		x	x
12.	Sub-total (1 to 11)		x	x
Chemicals and auxiliary Materials :				
13.				
14.				
15.	Others		x	x
16.	Sub-total (13 to 15)		x	x
Packing materials :				
17.				
18.				
19.	Others		x	x
20.	Sub-total (17 to 19)		x	x
21.	Consumable stores		x	x
22.	Total (12—16—20—21)		x	x

* Item to be specified by the owner of the factory.

** Specify units invariably in metric system, wherever applicable.

(I4) : Products and by products (excluding intermediate products) manufactured during the year

Sl. no.	Items*	Unit**	Manufactured	
			Quantity	Ex-factory Value (Rs.)
(0)	(1)	(2)	(3)	(4)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.	Others		x	x
20.	Total (1 to 19)		x	x

* Item to be specified by the owner of the factory.

** Specify units invariably in metric system, wherever applicable.

(15) Mandays worked, absenteeism and labour turnover for regular workers directly employed for each month of the year

(16) Working days, manhours worked and earnings during last month of each quarter

No.	Category of employees	No. of mandays worked	No. of manhours worked	No. of manhours worked regular	Gross earnings before deductions paid for overtime	Payment for overtime	Remarks	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

MARCH 1967

0. Number of working days during the month.....

1. men
 2. Workers employed directly } women
 3. children
 4. total (1 to 3)
 5. Workers employed through contractors
 6. Supervisory and managerial staff x
 7. Other employees x
 8. Number of working days during the month
9. men
 10. Workers employed directly } women
 11. children
 12. total (9 to 11)
 13. Workers employed through contractors

JUNE 1967

Table (continued)

14.	Supervisory and managerial staff	x	x
15.	Other employees	x	x
16.	SEPTEMBER 1967		
17.	Number of working days during the month.....		
18.	men		
19.	Workers employed directly	men	women
20.	children		
		total (17 to 19)	
21.	Workers employed through contractors		
22.	Supervisory and managerial staff	x	x
23.	Other employees	x	x
24.	DECEMBER 1967		
25.	Number of working days during the month.....		
26.	men		
27.	Workers employed directly	men	women
28.	children		
		total (25 to 27)	
29.	Workers employed through contractors		
30.	Supervisory and managerial staff	x	x
31.	Other employees	x	x

¹ Salaries, wages, bonus and contribution by employers to social security benefits during the accounting year

Sl. No.	Category of employees	Man-days worked	Salaries, wages, etc. (Rs.)	Bonus period to which amount paid relates	Remarks	
					(1)	(2)
1.	Workers employed	men				
2.		women				
3.	directly	children				
4.			sub-total 1 (1 to 3)			
5.	Workers employed through contractors					
6.	Sub-total 2 (4+5)					
7.	Supervisory and managerial staff					
8.	Other employees					
9.	Total (6+7+8)					
10.	Imputed value of individual benefits in kind (Rs.)					
11.	Imputed value of group benefits in kind (Rs.)					
					statutory	non-statutory
					(1)	(2)
					total	
						(3)
12.	Employer's contribution to old age benefits (Rs.)					
13.	Employer's contribution to other social security charges (Rs.)					
14.	Expenses incurred by employers (whether directly or by way of contribution to any fund) in connection with such benefits as maternity benefits, creche and so forth which are exclusively meant for women employees (Rs.)					

Trade Statistics

The statistics of trade in any country could broadly be studied under three heads *viz.*, the statistics of foreign trade, the statistics of internal trade and the statistics of distributive trade. In this chapter, an attempt is made to review the present position of India's trade statistics.

Statistics of Foreign Trade

Foreign trade statistics refer to the movement of goods into and out of the customs area of the country compiling these statistics. These statistics may be put to a number of uses. Besides forming an important component of balance of payments, foreign trade statistics are helpful in analysing the evolution of markets on which the volume and pattern of international trade depends, markets at home for imports and abroad for exports. In under-developed countries like India, where one faces on one hand the task of controlling imports with or without priorities and on the other that of promoting exports by governmental assistance, financial or otherwise, a study of foreign trade statistics proves very helpful. Moreover, these countries are foreign trade oriented and the desirability of having reliable and comprehensive statistics of foreign trade cannot be exaggerated. Foreign trade statistics are also helpful in formulating trade agreements.

In India, statistics of foreign trade are compiled and published by the Directorate General of Commercial Intelligence and Statistics (DGCI&S), Calcutta.

The system followed for recording India's foreign trade statistics in the 'General Trade System'. According to the United Nation's *Yearbook of International Trade Statistics*, the General and Special Trade Systems are defined as follows :

- (a) *Special Trade* : Special *imports* are the combined total of imports directly for domestic consumption (including transformation and repair) and withdrawals from bonded warehouses or free zones for domestic consumption. Special *exports* comprise exports of national merchandise, namely, goods wholly or partly produced or manufactured in the country, together with exports of nationalised goods. (Nationalised goods are goods which, having been included in special imports, are then exported without transformation).
- (b) *General Trade* : General *imports* are the combined total of imports directly for domestic consumption and imports into bonded warehouse or free zone. General *exports* are the combined total of national exports and re-exports. *Re-exports*, in the General Trade System, consist of the outward movement of nationalised goods plus goods which, after importation, move outward from bonded warehouse or free zone without having been transformed.

Thus in the general system no distinction is made at the time of entry between goods which are intended for domestic consumption and goods not known to be so intended. Similarly at the time of leaving, the general system distinguishes as re-exports those goods which are in substantially the same state as when they entered. The special system makes the distinction at entry between goods declared for domestic consumption and other goods, but does not distinguish as re exports those goods which leave the country in substantially the same state as when they entered.

The entire foreign trade in merchandise registered by customs and central excise authorities at Indian seaports, airports and land customs stations is included. The trade with Tibet, Bhutan and Sikkim and the trade arising in the Andaman & Nicobar Islands and Laccadive and Minicoy and Amindivi Islands are excluded. Land borne trade with Nepal is also excluded. This is mainly because of the absence of a customs frontiers. However, India's trade with the countries in certain selected articles is recorded at certain selected railway stations adjacent to land routes to those countries. These figures are published monthly.

in *Indian Trade Journal*.

Exports and Re-exports are credited to the country of final destination while imports are credited to the country of consignment. Further, changes in the names of the countries whenever they occur are made in the publication.¹

Prior to January 1957, data relating to Foreign Trade Statistics used to be received by the Department of Commercial Intelligence and Statistics in the form of consolidated monthly returns from the collectors of customs/central excise. From the 1st January, 1957 daily trade returns are furnished to DCI&S instead by each Sea port, air port and land customs station open to foreign trade.

Foreign trade data in India which upto 1952 were published in (i) *Accounts relating to the Foreign Trade (Sea and Air borne) and Navigation of India* and (ii) *Accounts relating to Trade of India by land with Foreign Countries*, came to be published into a single publication, *Accounts relating to the Foreign Trade (Air, Sea and Land) and Navigation of India*. In 1956, the name of this publication was changed to '*Accounts relating to the Foreign Trade and Navigation of India*'. From January 1957, India's foreign trade statistics are being published in '*Monthly Statistics of the Foreign Trade of India*' as this is confined exclusively to merchandise trade and, the navigational statistics were reserved for a separate publication.

In 1957, the trade classification was changed. The trade classification prior to January 1957 provided for separate specification of only 1717 items in all, 1047 for imports, 460 for exports and 210 for re-exports, grouped under five classes, viz., (a) food, drink and tobacco, (b) raw materials and produce and articles mainly manufactured, (c) articles wholly manufactured, (d) living animals, and (e) Postal articles and packages not specified.

This changed classification which was followed till March 1965, conformed to the standard laid down by the United Nations Statistical Office, and comprised of nearly 4850 items with 9-digit codes retaining the framework of the SITC (original) classification upto 5-digit item levels. The list was common

1. United Nations : *Year Book of International Trade Statistics, 1966*, New York, 1968, p. 6.

for imports, exports and re-exports. The items were classified into ten sections as given below:

- 0 Food
- 1 Beverages and Tobacco
- 2 Crude material, inedible oils except fuel oils
- 3 Mineral fuels, lubricants and related material
- 4 Animal and vegetable oils and fats
- 5 Chemicals
- 6 Manufactured goods classified by material
- 7 Machinery and transport equipment
- 8 Miscellaneous manufactured articles
- 9 Miscellaneous transactions and commodities not elsewhere specified.

In April, 1965, the trade classification was again changed. The commodities are now classified according to the Revised Indian Trade Classification (RITC) (1965) except in the case of petroleum products and 'prescribed substances' under the Atomic Energy Act, 1962. With effect from the issue of April 1968, the classification was amplified and is indicated in each issue of the *Monthly Statistics of Foreign Trade of India*. The sections according to the RITC are given below :

- Section 0 Food and live animal (9 divisions and 34 groups),
- Section 1 Beverages and Tobbaco (2 divisions and 4 groups),
- Section 2 Crude Materials, inedibles except fuels (9 divisions and 29 groups),
- Section 3 Mineral fuels, lubricants and related materials (3 divisions and 5 groups),
- Section 4 Animal and vegetable oils, and fats (3 divisions and 4 groups),
- Section 5 Chemicals (9 divisions and 16 groups),
- Section 6 Manufactured goods classified chiefly by material (9 divisions and 51 groups),
- Section 7 Machinery and Transport Equipment (3 divisions and 18 groups),
- Section 8 Miscellaneous manufactured articles (7 divisions and 18 groups),
- Section 9 Commodities and Transactions not classified according to kind (1 division and 5 groups).

As against 177 groups of the SITC (Revised), sub-divided into 625 sub-groups, there are 184 groups of the RITC, subdivided into 650 sub-groups (4-digit level). Out of the 650 sub-groups, 296 have been sub-divided into 1088 items (5-digit level), 610 of which have been further sub-divided into 4168 commodities (7-digit level). Total number of commodities separately specified in the RITC is 5000 (including 354 undivided sub-groups and 478 undivided items).

To facilitate proper classification of different commodities entering in the foreign trade of India, explanatory *notes* are given at the beginning of each section.

The coverage of foreign trade data is nearly trebled to as many as 5000 individual items since 1957. As neither the custom houses nor the DCI&S had any previous experience of this scale of operation entailing the preparation of a large number of daily returns, scrutiny and audit and of mechanical processing, delays and inaccuracies set in. Inspite of a three-fold expansion of the classified items, the time-lag in the publication of the monthly data was gradually reduced from 5 to 6 months to six weeks in the case of exports and between seven and eight weeks for imports. With effect from the issue for April 1960 the publication *Monthly Statistics of Foreign Trade of India* was split into two volumes, *viz.*, *Exports and Re-exports* as vol. I and *Imports* as volume II. With the bifurcation of the publication into two volumes, it has been possible to show in the summary tables of the publication, the comparative value figures of the total exports from or imports into India (monthly and progressive) for the previous year. This summary table shows total value in respect of each commodity group and each country.

An important change introduced during the year 1960 was in regard to the corrections reported by the customs authorities subsequent to the publication of the monthly trade data during 1960-61. Such corrections were separately tabulated and published in coded form every month as appendices to the main publication. With effect from April 1961, however, the corrections reported by the Customs authorities month by month are incorporated in the progressive figures once a quarter. Also with effect from the issue for October 1960, quantity figures are shown in metric units.

The foreign trade statistics of India which were published on financial year basis upto 1956, came to be published on calender year basis from January 1957. But on the advice of the Advisory Committee of the DGCI&S, the cumulative figures are compiled on financial year basis from April, 1960, thus reverting to the practice prevailing before January 1957.

Supplement to Monthly Statistics of the Foreign Trade of India : The publication, as the title suggests, supplements the foreign trade data in the main monthly publication, *Monthly Statistics of Foreign Trade of India*. Prior to December, 1956, most of the statistics contained in this publication used to be included in the monthly publication, *Accounts Relating to the Foreign Trade and Navigation of India*. Since January, 1957, these statistics are being published separately in the *Supplement*.

To facilitate handling, the *Supplement* was also divided into two volumes in April, 1960. Volume I contains 11 tables showing secondary type of statistics like overall balance of trade, index numbers of exports and imports, foreign trade of customs zones in merchandise and direct transit trade. Volume II contains statistics of India's merchandise trade with each country. Besides, a table is also devoted to India's trade with European Economic Community and the European Free Trade Association. These statistics are shown according to the different sections and divisions of the Standard International Trade Classification.

Upto March, 1962, the publication appeared in two volumes, the first, monthly and the second quarterly. In view of the emergency, the latter volume was discontinued while the former is brought out quarterly.

Indian Trade Journal : The first issue of the *Indian Trade Journal* was published on 5th April, 1906 and thereafter it is being issued every week. The *Journal* includes sections devoted to Government orders, Press Notes, *Communiques* and notices affecting trade, customs tariff, import and export notification, summary of similar notifications issued in other countries, and data among other items on prices and trade movements. In 1961, the arrangement of matter in the *Journal* was revised and the trade promotion news was brought forward as the principal feature.

The *Journal* also contains a statistical section which, among

other information, contains tables of index numbers of unit declared values and the quantum of foreign trade of India, India's trade by land with Nepal, Sikkim, Bhutan and Tibet, statistics of trade under bilateral agreements with foreign countries, Press Notes on the monthly foreign trade of India, etc.

The coverage of foreign trade statistics needs to be improved, particularly in respect of the *note pass system* which leaves out imports from first recording. Owing to the *note pass* procedure obtaining in Custom Houses for the clearance of Government imports, there is a delay in the receipt of full particulars by the DGCI&S. Under this system, the Government departments are allowed by the customs authorities to clear the goods imported by them giving an undertaking to furnish the full required particulars within a period of three months from the date of clearance. The concerned Government departments have, however, been taking unduly long time in furnishing the complete particulars, especially in the case of food imports. This procedure has, therefore, for a long time been responsible for the incomplete recording at the initial stage of the import on Government account.

Index Numbers of Quantum and Unit Value of Exports and Imports

The first series, on index numbers of exports and imports was calculated with reference to the year ending March, 1923 as base. Owing to far reaching changes in the pattern of trade as well as in coverage of the statistics, especially after partition, a new series calculated with reference to the year ending March, 1949 as base, was introduced with effect from 1949-50. Re-export trade which was excluded from the old series was included in the export trade for the purposes of this index. To fit in with the changing pattern of India's foreign trade, another revised series with 1952-53 as base was introduced with effect from 1953-54. Re-export trade was again excluded from the export index. Subsequent to the adoption of the Standard Indian Trade Classification in 1957, the wide disparity between the old and the new classification necessitated shifting of the base to a SITC period. Since the data for the first year (1957) of the revised classification was deficient in many ways, the

year 1958 has been chosen as the new base period for the present revised series of index numbers. We now describe the present revised series with base 1958=100, below.

Scope and Coverage

The change in the base period to 1958 has rendered the new series for import trade index more representative than the previous series. The total value of articles included in the new imports index accounts for a coverage of 84% of the total value of imports of all articles as against 70% in the old series. Coverage of exports index, however, remained the same at 92%. The number of articles directly taken into account in calculations of the present series number to 511 for imports and 317 for exports. Larger coverage is not attempted with a view to facilitating expeditious computation of the index numbers.

Method of Construction

As in the case of old series, the revised index numbers are of the fixed base type. The unit value (Price) Index Numbers are calculated according to the Paasche formula. The Quantum Index Numbers according to Laspeyres formula are not computed separately but are derived from the former Indices.

The method of calculation of unit value Indices briefly consists in comparing the trade in the current period with that revalued at 1958 prices. Symbolically, the Index Number P is given by the formula :

$$P = \frac{\sum P_n Q_n}{\sum P_o Q_n},$$

where, P_o and P_n denote the value of an article in the base period and the current period respectively, and Q_o and Q_n its respective quantities in these periods respectively.

As mentioned above, the Quantum Indices are derived from the unit value Indices (P) as follows :

$$Q = \frac{1}{P} \left(\frac{V_n}{V_o} \right) \times 100,$$

where, V_o and V_n are the total values of trade in the base and current periods respectively.

Adjustment for Incomplete Coverage

It is not possible in practice to include all the commodities

entering into trade since information on quantities is lacking for many miscellaneous items in the trade records. Such items cannot be included in the cross-valuation and hence do not appear directly in the compilation of Index Numbers. Adjustments, are, therefore, made in the final Index Numbers to allow for incomplete coverage. These adjustments are based on the assumption that the price changes in the items not covered in a section are similar to those shown by the items included in the calculation for the section. The method of adjustment is explained below :

The unit value Index (P) for the included items in a section is given by the formula :—

$$(1) \quad P = \frac{\sum P_n Q_n}{\sum P_o Q_n}.$$

The index for all the items of the section will be

$$(2) \quad P' = \frac{\sum' P_n Q_n}{\sum' P_o Q_n},$$

while the aggregate $\sum' P_n Q_n$ is known, the aggregate $\sum' P_o Q_n$ is unknown and it cannot be computed directly. It is therefore estimated on the assumption that the price changes for the covered items and for all the items are the same. In other words, $P' = P$

$$\begin{aligned} \frac{\sum' P_n Q_n}{\sum' P_o Q_n} &= \frac{\sum P_n Q_n}{\sum P_o Q_n} \\ \text{Hence } \sum' P_o Q_n &= \frac{\sum' P_n Q_n}{\sum P_n Q_n} \times \frac{\sum P_o Q_n}{\sum P_n Q_n} \\ &= \left(\sum' P_n Q_n \right) \left[\frac{\sum P_n Q_n}{\sum P_o Q_n} \right] \end{aligned}$$

$$= \frac{\text{Total value of all items in the section}}{\text{unadjusted Index for the section}}$$

The adjusted Index Number P' is obtained by substituting the above value of $\sum' P_o Q_n$ in the equation (2). The General Index is then derived by averaging the separately adjusted sectional indices appropriately.

Quantum Indices are similarly adjusted for incomplete coverage by using the adjusted unit value Index P' instead of the unadjusted Index (P) occurring in the formula for deriving the Quantum Indices.

Adjustment for Seasonal Variations

For want of figures according to the revised trade classi-

fication for a long number of years, adjustments are not made for seasonal variations.

Internal Trade

The term 'internal trade' refers to the *total exchange of goods* that takes place between the different regions or states and within each region or state of a country. The act of internal exchange is more frequent and multifold than that of foreign trade. The economic development of India has resulted in the expansion in the volume of internal trade and the proportion of internal trade in relation to our foreign trade would continue to rise. The desirability of having complete and reliable statistics of internal trade cannot be overemphasised in the context of studying the interdependence of different regions and also the direction and composition of trade that take place between various States. These statistics also help us in getting a better insight of the structure of the Indian economy in so far as it is revealed by the inter-regional flow of trade and its various related and concomitant factors. However, owing to the non-availability of adequate data for evaluating the exports from and imports into each State, the task of framing reliable and accurate estimates of balance of trade for each Indian State becomes very difficult.

The trade between regions or States of a country may take place through,

- (i) Land routes —(a) by road
 (b) by rail
- (ii) Water routes —(a) River borne trade
 (b) Coastal trade
- (iii) Air routes

Trade by Land and Water routes.

So far as internal trade by road is concerned, hardly any reliable and usable statistics exist. Except for a study made by the National Council of Applied Economic Research, New Delhi on Road Goods Transport in Delhi region which gives some valuable information regarding outward movement of goods from Delhi to various places in Rajasthan and Uttar Pradesh to a distance of even over 400 miles, we do not have any other

source of statistics of trade by roads. A possible source of getting these statistics is to analyse the Octroi duty records of the municipalities lying in the border areas of different States. These records may provide some data regarding the volume of goods transported by road between different States. It is also suggested that surveys of the type taken up by NCAER may help us in filling the void in our statistics of internal trade by road. The Planning Commission has suggested statistical scheme relating to survey of goods traffic by road as one of the core schemes of the Fourth Five Year Plan to fill up a very big gap in this direction.

The statistics of inland trade by rail and river are compiled and published by the D.G.C.I. & S. and are presented in the *Accounts Relating to the Inland (Rail and River borne) Trade of India*, a monthly publication.

The data relating to rail and river borne trade are reported on a monthly basis by eight zonal railways and Joint Statistical Department of M/s India General Navigation and Railway Co. Ltd. and Rivers Steam Navigation Co. Ltd. and the land customs stations on the Tripura-Pakistan Border respectively. Prior to 1922, the statistics relating to the inland trade of India were compiled from quarterly returns furnished by local governments. In 1922, the publication was discontinued as a measure of economy but compilation and publication were resumed in 1933, on the basis of monthly returns received from the railways and the steamer services concerned. The statistics as contained in the publication relate to the inland traffic carried by the railways and steamer services and represent the movement of selected commodities contained in Annexure A of this publication from one trade block to another. Prior to April, 1962, there were 29 Trade Blocks. The list has since been amplified with a view to taking into account the bifurcation of the erstwhile Bombay State into Gujarat and Maharashtra. It was further amplified in April, 1965 to provide separate formation of Nagaland. For the purposes of accounts, and as from April, 1965, India is divided into 32 Trade Blocks, representing the States and Centrally Administered Territories of Indian Union as constituted under the States Reorganisation Act, 1956, Bombay Reorganisation Act, 1960, and the State of Nagaland Act, 1962, Pondicherry, Karikal and Goa, except Andhra Pradesh, Gujarat, Kerala, Tamilnadu, Maharashtra, Mysore and West Bengal.

which have been constituted into more than one Trade Block.

The statistics are based on the invoices submitted by the traders to the concerned railway authorities and to the River Steam Navigation Company Limited, which process them, and submit the consolidated monthly returns to the DGCI & S. They are, however, confined to 67 commodities and are reported in terms of quantity rather than value. Prior to February, 1965, the figures published in the *Accounts relating to the Inland Trade of India* were reported on 'import' basis. From February, 1965, however, the statistics are compiled on 'export' basis i.e. the figures show the aggregates of consignments despatched from one trade block to other trade blocks.

The statistics of inland rail and river borne trade are not adequate. The river borne trade statistics cover only the goods carried by certain steamer companies and that too between three trade blocks viz., Calcutta, Assam and West Bengal (excluding Calcutta). Further the trade carried by country boats which used to be recorded prior to 1922, is also not included. Only certain selected commodities are covered in these accounts. Moreover only goods traffic is covered, thus leaving out parcel traffic which is of considerable importance especially in the case of perishable articles. Another difficulty which arises in using the inland trade figures is the absence of value figures of trade. It is not possible to get an idea of the overall volume of inland trade, the relative importance of different commodities entering into inland trade and above all, the inter-dependence of different trade blocks etc. without having commodity-wise and aggregate value of imports and exports. The reason why value figures can not be obtained is because of existence of great disparity between prices for the same commodity in different parts of the country.

Statistics of Coastal Trade

The statistics of coastal trade are compiled by the DGCI & S, Calcutta and these are regularly published in the *Statistics of the Coasting Trade of India*. Previously the coasting trade statistics used to be part of the annual publication *Foreign Trade and Navigation of India*, the first issue of which related to the year ended 30th April, 1867. Later on a separate publication was devoted to coasting trade, but this publi-

cation was discontinued for reasons of economy after its 56th issue for 1921-22. This publication was resumed with an issue for April, 1932 in the form of a *Monthly Accounts Relating to the Coasting Trade and Navigation of India*. This publication was, however, discontinued with the issue for March, 1957 and it was replaced by *Statistics of the Coasting Trade of India*. The tables relating to navigation in coasting trade included in the former publication have been transferred to a new publication, *Statistics of Maritime Navigation of India*. These statistics relate to the movement of merchandise and treasure in the coastal trade of India. Coasting trade is registered separately from trade in the custom houses. For the purpose of these statistics, the Indian Coast is divided into the following Maritime Blocks on the basis of reorganised States of India.

(i) West Bengal, (ii) Orissa, (iii) Andhra Pradesh, (iv) Tamilnadu, (v) Kerala, (vi) Mysore, (vii) Maharashtra, (viii) Gujarat, (ix) Andaman and Nicobar, (x) Laccadive, Minicoy and Amindivi Islands.

Further, Pondicherry was adopted as a maritime block for the purposes of coasting trade statistics with effect from 1961. Also from 1963, 'Goa, Daman and Diu' is being treated as a separate Maritime Block. There are thus 12 maritime blocks now in respect of each of which coastal trade is recorded separately under exports and imports. For the purposes of trade and tariff, Pakistan is being treated as foreign country with effect from 1948 and coasting trade with Pakistan ports is excluded from that date.

Coasting trade is recorded under two broad heads viz., Internal trade relating to trade amongst ports within the same maritime block (including the trade between a customs port and a coastal port registered at the former) and external trade relating to the trade between one maritime block on the one hand and all the maritime blocks on the other. In this publication, internal trade and external trade are shown separately. Imports and exports of merchandise and treasure *i.e.* gold and silver (coin as well as bullion) are separately recorded at the custom houses and are separately exhibited in these statistics. Passengers, luggage, postal and merchandise or treasure transhipped at a custom port are not included. With effect from April 1961 transactions in silver

(other than current coins) have been included in the merchandise trade. The figures show the trade declared in the shipping documents passed by the custom houses up to the last working day of the month or as near to that date as is practicable. The documents are checked with reports of short arrivals or shipments. The articles are arranged in alphabetical order under two main heads; Indian merchandise comprising all goods which are the growth, produce or manufacture of India, and foreign merchandise. The Indian merchandise is distinguished from the foreign merchandise in the declarations made by importers and exporters in the Shipping documents. Different lists of articles are used for recording the trade in India and foreign merchandise, respectively.

The figures given in the *Statistics of the Coasting Trade of India* represent the quantities and values declared by importers and exporters in the Bills of Entry and Shipping Bills as subsequently checked by custom offices. The limitation of these statistics is that there are no arrangements for direct registration of trade in the Laccadive Minicoy and Amindivi Islands.

Air Borne Trade

Air borne trade has recently assumed great importance. Although trade is carried on by organised agencies, the required data are not built up in any form but for the total freight carried. The main gaps in these statistics are that the commodity-wise and region-wise breakdown of movements are not available. However, these can be built without much extra effort from the invoices submitted by the air companies.

Thus we see that statistics of inland trade are far from complete. Hardly any information is available regarding the movement of goods by road and air. Even in the case of rail and river borne trade, the coverage is not complete. It would also be useful if the data besides being arranged in trade blocks, are also arranged according to States. In regard to rail and river borne trade only quantities are available. It would be useful to have value figures also. This would of course present problems of valuation and the prices to be included. Regarding coasting trade statistics, the districts of exports and source of are not available.

Distributive Trade

The term 'Distributive Trade' may refer to the transactions in goods and services from the production stage to the stage of its final consumption. It may cover stocking of commodities at different levels of trade. During the process of sales, the commodity may be graded when qualities differ, sorted into different varieties and moved to the market and from there to the places of consumption. During this period the commodity passes through a number of wholesalers, commission agents and retailers. Distributive trade embraces all transactions involved in the passage of goods from production point to the consumption point. While statistics relating to distributive trade are of great importance in the context of compilation of national and regional incomes, they are even more necessary to trade and industry for marketing research and market surveys, and for planning. Statistics of trade by type of business and by type of broad commodity groups and over period of time can indicate areas of expanding or contracting demands for different commodity-groups and the broad patterns of changing consumer tastes. It may also be possible in a large number of cases to correlate the sales of individual products with the sales of their respective commodity-groups and thus forecast the sales of the individual commodity on the basis of the trends for their respective commodity groups. A clearer picture about the differential rates of margin between the wholesale price and the ex-factory price, and between retail and wholesale price could also be had through the statistics of distributive trade. In short the uses of such data are so many that their importance can hardly be exaggerated.

Amongst the many uses of statistics of distributive trade, the two important purposes for which these statistics are required are : one, for providing basic statistics for administration of Sales Tax, and the other for computation of National and State Incomes.

At present regular and reliable statistics of distributive trade are not readily available. Of course, from the Sales Tax returns, certain figures relating to distributive trade may be obtained. Attention to this aspect was first given at the second meeting of the Central Technical Advisory Council of Statistics

held at Hyderabad from 11th to 15th October, 1962. It recommended that surveys of registered trade may be conducted annually using the State sales tax frame while a survey of non-registered trade may be conducted once in five years through the National Sample Survey. In the second phase a complete census of shops and establishments may be conducted to collect information on total sales, employment, kind of activity and business. Thereafter using this census as a frame, an efficient sampling could be drawn up to conduct an integrated survey of the entire trade. In certain cases survey on the basis of area sampling could be conducted. Statistics of turnover of goods for certain States is available in respect of each group of commodities subjected to the specified rates of sales tax.

In its 7th, 8th, 9th, 10th and 15th rounds, the NSS conducted sample enquiries on trading activities in the household¹ sector. Whereas the scope of the first four surveys was restricted to retail trading activities of the households, the 15th round survey covered the entire household non-registered trade. The results of the first three surveys are contained in the NSS Report Number 24 and those relating to 10th and 15th rounds in NSS Report Numbers 41 and 99, respectively. The information collected related to gross value of purchases, sales and consumption etc., major purchases and sales of merchandise, number of persons engaged in trade and wages paid to hired labour.

Reference :

A Guide to Official Statistics of Trade, Shipping and Customs and Excise Revenue of India, (Revised Edition) Department of Commercial Intelligence and Statistics, Calcutta, 1965.

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1. Household trading was defined as trading *i.e.* actual purchase of goods and their disposal by way of sale, without any intermediate physical transformation whatsoever of the goods during such transactions by individual households or jointly by two or more households as distinct from operations by non-household organisations like joint-stock companies, cooperative societies and other public bodies.

Price Statistics

The term 'price statistics' is generally used to cover not only the basic data of the actual prices of individual commodities and services but also the various price index numbers which are compiled to measure the movement of prices of a group of commodities over a period of time. The most common and traditional use of price statistics has been in analysing changes in prices, output and other indicators of general economic conditions in relation to one another. Price data are also needed in order to evaluate the terms of trade, to identify sources of inflationary and deflationary pressures and to measure the economic well being of the consumers. These are required for formulating price policies relating to selected kinds of producers, consumers or external trade, establishing prices in the case of various types of transactions, and for the estimation of national income. Price statistics are also in demand in establishing changes in wages and salaries of the employees.

Compilation of Price Statistics

The price data have been collected and compiled for a few selected commodities from the very early days of the development of modern statistics in India. The Department of Commercial Intelligence and Statistics which was set up in 1895, was the organisation mainly responsible for the collection, compilation and dissemination of price statistics in India right from 1897 to the beginning of the Second World War. During the Second World War, various deficiencies in the official statistics of India were felt and a number of statistical departments emerged under the Central and State Governments. A large mass of price data came to be collected through the various agencies like the 'statistics cell' of the Department of Food

(which in 1948 became the Directorate of Economics and Statistics), Office of the Economic Adviser to the Government of India, the Labour Bureau, Civil Supplies Department, etc. This led to a great deal of duplication of effort and overlapping in the material collected. The Government of India, therefore, appointed the Agricultural Prices Enquiry Committee in 1953 to examine the machinery for the reporting of prices of agricultural commodities and to suggest improvements to render the price collection more efficient. The Committee made a series of valuable recommendations with regard to the collection of agricultural prices. The Wholesale Prices Index Revision Committee set up by the Ministry of Commerce and Industry in 1956 also made a series of recommendations concerning the all-India wholesale price index.

At present the official series of price statistics relate to (i) wholesale prices, (ii) retail prices, (iii) harvest prices, (iv) import and export prices, and (v) security prices. At the Centre, the Office of the Economic Adviser to the Government of India, the Directorate of Economics and Statistics, the Labour Bureau, the Central Statistical Organisation, the Directorate General of Commercial Intelligence and Statistics and the Reserve Bank of India are the main agencies responsible for the collection and dissemination of these statistics. In addition, a number of State Governments are collecting price statistics for various commodities and are publishing the same in their regular publications. In the following pages each of the above series of price statistics has been discussed in some detail.

Wholesale Prices

Serial statistics relating to wholesale prices of certain selected commodities (23 in number) were published from the beginning of 1897 in *Prices and Wages* issued by the Department of Commercial Intelligence and Statistics. The publication was discontinued from 1922 due to the defective quality of data. Another publication of the same Department called *Index Number of Indian Prices, 1961-1931* presented a continuous series of index numbers of wholesale prices with 1873 as base. From January to September 1939, data on wholesale price were published in the *Indian Trade Journal* which had a section

entitled, 'wholesale prices of certain selected articles at various centres in India.' From October, 1939, this was issued as a separate publication. The prices of almost all commodities that entered into the trade in any large measure were contained in this publication. Figures were given for several varieties in the case of most of these commodities and they generally related to the Chief markets only. The figures represented the wholesale prices prevailing in the markets during the first week of each month included in the quarter under review and were based on information supplied by commercial organisations.

During the Second World war, controls and restrictions were imposed on the movement of agricultural commodities and the government assumed the responsibility for maintaining the price level of foodgrains. In this context the price data of agricultural commodities collected by the Department of Commercial Intelligence and Statistics were found inadequate and the Department of Food started collecting prices from a large number of centres all over the country. During this period a new type of 'controlled prices' also came to assume importance. These were procurement rates, wholesale issue rates, retail ration rates and other control rates. The Department of Agricultural Marketing was also then collecting independently data on the wholesale prices of principal agricultural commodities from a few important markets in each case. However, with the introduction of controls and disappearance of open markets, the scope of the data collected by the Department of Agricultural Marketing automatically diminished. All this work was, therefore, subsequently centralised in the Directorate of Economics and Statistics. Since then the Directorate has been systematically collecting and putting out a large volume of data on wholesale prices of agricultural commodities.

Data on wholesale prices have also been collected for a long time in the States and Union Territories. The State Revenue Departments needed information on prices for purposes of periodical land revenue settlement operations. In some States, the District Collectors were required to indicate the current prices with periodical *Season and Crop Reports*. Some States had well-developed Agricultural Marketing Departments which collected price data. With the establishment of Food and Civil Supplies Departments in the various States during the

Second World War, data on prices of foodgrains and other controlled commodities came to be collected for the administrative use of those departments. The post-war emergence of Directorates of Economics, and Statistical Bureaus in most States added a new dimension to this effort. In all the States and as also in most of the Union Territories, these Departments are now actively participating in the collection and or analysis of wholesale price data.

Wholesale price data collected by the Office of the Economic Adviser

Data on wholesale prices collected by the Economic Adviser can be classified under the following heads:

- (1) price data for the index of wholesale prices;
- (2) daily market rates;
- (3) foreign prices of selected export commodities and raw materials ;
- (4) c.i.f. and market prices of selected import commodities.

1. *Price data for the index of wholesale prices* : The data on wholesale prices for 139 commodities are at present collected by the Office of the Economic Adviser for the purpose of constructing the new series of Index Number of Wholesale Prices in India (1961-62 = 100). The weekly prices together with the index numbers for individual commodities and for the different groups are published in the weekly bulletin, *Index Numbers of Wholesale Prices in India, New Series (Base 1961-62 = 100)*.

The price data are collected through both official and non-official sources. Some of the important official sources are : Agricultural Marketing Department, Bureaus of Economics and Statistics, District and Sub-divisional Offices, Forest Officers, Registrars of Cooperative Societies and other primary agencies belonging to the State Governments, Directorate of Economics and Statistics, Collectors of Customs, Central Commodity Committees, State Bank of India. The non-official sources are Chambers of Commerce, Trade Associations and leading business houses. Out of 774 quotations included in the new series, 382 are received from official sources and the remaining 392

from non-official sources. Majority of the quotations received from official sources relate to agricultural commodities, while non-official quotations relate to manufactured and non-agri-

cultural commodities. As regards the content of prices, they represent wholesale transactions at the primary stage. In cases where data are quoted for other points of distribution, the place and the terms of delivery are clearly specified. Excise duties are included in the prices, but sales tax is generally excluded. Where they are included, they are specifically mentioned.

2. *Daily market rates* : The Economic Adviser's Office also collects and publishes daily wholesale price quotations for 60 principal agricultural commodities and raw materials such as raw jute, raw cotton, raw wool, coir yarn, leather shellac, vegetable oils and jute manufactures. No index numbers are computed from these prices.

3. *Foreign prices of selected export commodities* : The prices of selected export commodities and important raw materials are collected regularly from the U.K. and the U.S.A. markets. These include tea, hessian cloth, linseed oil, castor oil, pepper, manganese ore, lead, copper, zinc, aluminium ore, tin, rubber, jute, cotton, sulphur, wool, etc. These prices are included in a monthly bulletin called '*Review of Indian and Foreign Prices of Selected Export Commodities*'. The bulletin is 'for official use only'.

4. *C.I.F. and market prices of selected import commodities* : These prices are collected on a monthly basis from Bombay, Madras and Calcutta. The data are supplied by the local offices of the Chief Controller of Imports and Exports and are included in a monthly bulletin called '*Review of C.I.F. and Wholesale Prices of Selected Import Commodities*'. The bulletin gives the prices for commodities such as meters of different types, cycles and cycle parts, chemicals, tracing cloth, wool, packing material etc. This bulletin is also 'for official use only'.

Directorate of Economics & Statistics, Ministry of Food, Agriculture, Community Development and Cooperation

The Directorate of Economics & Statistics has been regularly collecting data on wholesale prices in respect of 75 agricultural commodities from 469 marketing centres on a weekly basis as recommended by the Agricultural Prices Enquiry Committee in 1954. The prices are reported generally by the technical agencies specially set up for this purpose as per the market intelligence scheme under the Department of Agricultural

Marketing or the Directorate of Economics and Statistics. In a few cases, however, the prices are still collected by the old agencies such as Revenue and Civil Supplies staff. To ensure reliable reporting, the work of the reporting agencies is supervised by the supervisory officers of the State Governments and the Inspecting Officers and the Marketing Intelligence Inspectors of the Directorate of Economics & Statistics, posted in different regions of the country. The weekly data have continuously been collected since 1954-55 and published in two bulletins, viz. (i) *Wholesale prices of Foodgrains* (for official use only) and (ii) *Bulletin of Agricultural Prices* (Weekly). The latter bulletin gives data on wholesale and retail prices of various agricultural commodities at selected Indian market centres and wholesale prices in selected foreign markets. The prices are generally collected as on Friday and are published by the following Wednesday. The *Agricultural Situation in India* (monthly) contains the month-end wholesale prices of certain important agricultural commodities including animal husbandry products at selected centres for the month under review, the previous month, and the corresponding month of the previous year. Month-end retail prices of fruits (fresh and dry), vegetables, livestock products, fish, egg, poultry and livestock products are also published for the latest month, the previous month and the corresponding month of the previous year.

Agricultural Prices in India (annual) gives in a single compass the farm harvest prices and the wholesale and retail prices in respect of agricultural commodities. The first issue brought out in 1950 contained price statistics in respect of agricultural commodities for the erstwhile part A States for the period 1939 to 1950. From the eighth issue, the price data are given according to the reorganised States.

Directorate General of Commercial Intelligence & Statistics

The Directorate General of Commercial Intelligence and Statistics collects monthly data on wholesale auction prices of about 30 commodities which are of either industrial importance or are export commodities. The data are supplied by the Chambers of Commerce and Industry of Bengal, Madras, Bombay and Cochin, the Collectors of Customs, the State Bank of India (Madras), the Coffee Board, the Mill Owners' Associa-

tion, Bombay, the Imperial Chemical Industries, Calcutta, the Central Excise Department etc. The data are published in the *Indian Trade Journal*.

Retail Prices

Statistics of retail prices are usually collected for the preparation of consumer price indices. Some data on retail prices are also collected with the object of watching the price situation of essential commodities of mass consumption.

The earliest known series of retail price data available in published form are those contained in the quinquennial publication of the Department of Commercial Intelligence and Statistics, known as the '*Index Numbers of Indian Prices*'. Index numbers of retail prices of foodgrains computed as unweighted averages of the price relatives of seven commodities *viz.*, rice, wheat, *jowar*, *bajra*, gram, barley and *ragi* with 1873 as base used to appear in that publication, which was discontinued after the first World War due to serious deficiencies of the index.

The earliest cost of living indices published in India relate to Bombay city with 1914 as base and to Jamshedpur (Bihar) with the quinquennium ending 1914 as base. The sharp rise in prices towards and after the end of the First World War focussed attention on the problem of industrial wages, and with a view to regulating wages in terms of the changes in the cost of living, several provincial (state) governments took up preparation of cost of living index numbers. During the decade that followed, family budget surveys of the working class population were organised at a number of industrial centres in the provinces of Bombay, Bihar and Orissa. The Royal Commission on Labour in India reviewed the position in 1931 and advocated construction of reliable cost of living indices in all the industrial provinces. Consequently, by the early forties cost of living indices were being published in respect of 38 industrial centres—9 in Madras, 8 in Central Provinces, 6 in Bihar, 5 in Punjab, 4 in Bombay, and 4 in Uttar Pradesh and 2 in Orissa.¹

1. *Guide to Current Official Statistics* (Vol. I) entitled '*Production and Prices*' 4th edition, Manager of Publications, Delhi, 1949, p. 132.

The Second World War again brought in its wake the problem of rising prices and lagging wages. The Rau Court of Enquiry constituted under the Trade Disputes Act to investigate the question of dearness allowance for railway employees observed in 1941 that none of the cost of living indices then available were entirely satisfactory and recommended preparation of reliable cost of living indices for three distinct classes of areas, viz., city, urban and rural, by the Central Government. In pursuance of these recommendations family budget surveys were conducted during 1943-46 in 28 industrial centres, 6 of which subsequently became part of Pakistan. Working class cost of living index numbers were later prepared by the Labour Bureau in respect of 16 Centres. As all these indices related mainly to industrial workers, a need for similar indices for other categories of workers was also keenly felt. The Economic Adviser to the Government of India organised in 1945 a family budget survey of the Central Government employees, but this was not followed with the collection of prices and construction of cost of living index. The Government of Bengal initiated in 1947 menial and middle class cost of living indices for Calcutta on the basis of some surveys conducted in 1945-46. The first Agricultural Labour Enquiry, 1950-51 laid the foundation for a series of consumer price index numbers for Agricultural labour. A number of States e.g. Uttar Pradesh, the then Madhya Bharat, and Assam brought out during this period a variety of new series with differences in scope.

During the early fifties, the Central Government felt the need for an all-India index. The cost of living index scheme of the forties left out some of the States from the scope of the Labour Bureau's work. The all India index had, therefore, to be based partly on the Labour Bureau's own series (Base 1944=100) and partly on the series compiled by the States—each with a different base period, different scope and different methodological detail.

The need for middle class consumer price indices was felt in connection with the revision of pay scales and adjustment of allowances of salaried employees. This was pointed out by the Central Pay Commission (1947), the Dearness Allowance Committee (1952), the Wage Board for Working Journalists (1957) and the Second Pay Commission (1957-58).

In order to consider the various problems involved in the construction of consumer price index numbers and to bring the different series on a scientific footing, the Government of India appointed a Technical Advisory Committee on Cost of Living Index Numbers in 1954 which has been functioning since then. The Technical Advisory Committee recommended that fresh family living studies be conducted in various centres, separately for industrial workers and middle class families. Consequently, fresh family living surveys were undertaken in 1958-59 in 50 industrial centres selected from all over the country. Simultaneously 'middle class family living surveys' were conducted in 45 centres to provide the basis for a series of consumer price index numbers for non-manual employees. New series of consumer price index numbers for industrial workers have since been constructed by the Labour Bureau with base 1960=100. The index series for non-manual employees are being compiled by the Central Statistical Organisation with 1960=100. The consumer price index for agricultural labour based on the first Agricultural Labour Enquiry, 1950-51 has been replaced from September 1964 by a new index with 1960-61=100 as base and weights derived from the second Agricultural Labour Enquiry, 1956-57. Along with the Labour Bureau's surveys of 1958-59, fresh family budget surveys have been taken up by some of the States and new series of consumer price index numbers are continuously coming up in the States.

Apart from the data collected for the construction of consumer price indices, information on retail prices has also been frequently collected by the authorities connected with the administration of revenue, agriculture, marketing and civil supplies in the States. The Directorate of Economics and Statistics, has been collecting data on the retail prices of agricultural commodities since 1948. The National Sample Survey has also been collecting data on retail prices in the consumer expenditure schedule canvassed in the various rounds in the rural and urban areas.

With the declaration of 'emergency' in October 1962, the price situation became a matter of concern and a new spurt of statistical activity in the field of retail prices became evident. A 'Price Research Unit' was set up in the Central Statistical

Organisation in December 1962 with the task of bringing together the available information on retail prices, identifying the gaps, and assessing the significance of retail prices trends in different parts of the country and for different sections of the community. The Central Statistical Organisation consequently started from December 1962 the following price bulletins on a monthly basis which were meant 'for official use only'.

- (i) *Retail prices of 40 essential commodities at 45 cities and towns* : Series A, issued up to December, 1967 ;
- (ii) *Retail prices of 18 essential commodities in rural areas*: Series B, issued upto March, 1968 ;
- (iii) *Retail prices of 20 essential commodities at 50 industrial centres* : Series issued upto February, 1968 ;
- (iv) *Retail prices of non-agricultural commodities and of few items of food and edible oils* : Series D, issued upto June, 1968.

Harvest Prices

Statistics of farm prices and harvest season prices are collected in respect of principal crops through the State governments and the non-official agencies like the State Bank of India. Two series of statistics of harvest or farm prices are available in the country. The first series of prices is collected through normal reporting agencies for the collection of agricultural statistics and also published in '*Season and Crop Reports*' of different States. These were formerly published in the *Indian Agricultural Statistics*. Since 1947-48, these are published in the *Agricultural Prices in India* (called *Indian Agricultural Price Statistics* upto 1951). The farm (harvest) price of a commodity is the average wholesale price at which the commodity is disposed off by the producer to the trader at the village site during the specified harvesting period. The data are to be collected from a selected number of representative villages and the weekly price data during the specified harvesting period, usually six to eight weeks after the commencement of the harvesting period, are to be recorded by the primary agency responsible for the collection of agricultural statistics. The average price for the district for each week is obtained as the simple arithmetic average of the tehsil prices, which are in turn the simple arithmetic

average of village prices. The State average price is to be worked out as a weighted average of the district prices with production of the crop in the district for the current year as weights.

The other series of harvest season prices is based on the data collected through non-official agencies, principally the branches of the State Bank of India. These represent merely wholesale prices during harvest season and are hence called 'harvest season prices'. The prices are the averages of the weekly wholesale quotations during the harvesting period at the important marketing centres adjoining the major producing areas for each crop. These statistics are published in the monthly journal *Agricultural Situation in India* issued by the Directorate of Economics and Statistics.

A series of index numbers of harvest prices, based on the harvest season prices collected through the agency of the State Bank of India, is compiled by the Directorate of Economics and Statistics and published in the *Agricultural Situation in India*.

The farm (harvest) prices are used in the computation of national income from the agricultural sector.

Index Numbers

Wholesale Price Index Numbers

Wholesale price index numbers may be of two kinds viz., general purpose and sensitive. The general purpose index is intended to reflect the changes in the general price level accurately and to serve as a measure of the fluctuations in the purchasing power of money, while the sensitive index is considered as an indicator of the movements of the general price level rather than as a precise measure of the level itself. In the former, therefore, it is necessary to include as many commodities as possible to give adequate representation to commodities belonging to different fields of production while in the latter it is enough if only a few important commodities, the prices of which are likely to react quickly to market sentiment, are included. Sometimes the sensitive indices are compiled for a particular commodity/commodity-group also.

The first all-India index number of wholesale prices with the sensitive series called '*Weekly Index Number of Wholesale*

*Prices of Certain Selected Articles in India*¹ was compiled with the week ending 19th August 1939 as base. The index numbers are available with effect from week ending 19th September 1931, although they were published by the office of the Economic Adviser on a weekly basis from the week commencing from 10th January 1942.¹ The index was computed as a geometric mean of the price relatives of the following 23 commodities with equal weights :

- | | |
|----------------|----------------------------------|
| 1. rice | 13. coal |
| 2. wheat | 14. lac |
| 3. tea | 15. wool |
| 4. coffee | 16. hides and skins raw |
| 5. sugar | 17. kerosene |
| 6. groundnuts | 18. petrol |
| 7. tobacco | 19. cotton manufactures |
| 8. copra | 20. jute manufactures |
| 9. linseed | 21. cement |
| 10. raw cotton | 22. galvanised corrugated sheets |
| 11. raw jute | |
| 12. pig iron | 23. leather. |

The index was classified into 4 groups viz., (1) food and tobacco, (2) agricultural commodities, (3) raw materials, and (4) manufactured articles. This sensitive series is available upto December 1947.

The Economic Adviser's Office compiled a new index for 'Food Articles' in 1945 with the year ending August 1939 as base. This index was compiled as a weighted geometric mean of price relatives, the weights being proportional to the value of the marketable surplus of the various commodities during the year 1938-39. This series was subsequently expanded to replace the earlier sensitive index of the wholesale prices. In 1947 the Economic Adviser's Office compiled another index, the general purpose index, with the year ending August 1939 as base. This index was based on 78 commodities selected to represent the price movements in all important commodities, whether domestically produced or imported. In all 215 quotations were collected for these commodities from various centres on or about Friday

1. Economic Adviser's Weekly Index Numbers of Wholesale Prices in India, Vol. II (1942-45), Manager of Publications, Delhi, 1946.

of each week. The data published each week included both price relatives and absolute prices of the various representative specifications of articles at representative markets in the country. The commodities were combined into 18 sub-groups and 5 main groups. The weights were assigned on the basis of the marketed value of each commodity in 1938-39. The number of commodities included in the different groups and weights allotted to them were as follows :

<i>Commodity group</i>	<i>Number of commodities</i>	<i>Weights assigned</i>
I. Food articles	11	31
II. Industrial raw materials	19	18
III. Semi-manufactures	23	17
IV. Manufactures	19	30
V. Miscellaneous	6	4

The monthly indices were obtained as the geometric mean of the weekly index numbers, and annual averages as the geometric mean of monthly indices.

The range of items and the centres in this series were mostly governed by the availability of data in pre-war years. The system of weighting based on output and consumption pertaining to undivided India, also became inappropriate after the partition of the country. The base year was also a pre-war year and became out-dated. In view of all these shortcomings, a new series known as 'revised index number of wholesale prices' was issued from April 1956 onwards.

Revised index number of wholesale prices (1952-53 = 100) : The existing revised index number of wholesale prices compiled by the Office of the Economic Adviser includes 112 commodities comprising of 555 individual quotations. The quotations relating to agricultural commodities were expanded in scope on the basis of the recommendations of the Agricultural Price Enquiry Committee, 1954.

In the selection of an appropriate base year for the existing (revised) index the main points considered were that (1) it should be a post-war and post partition year of narrow fluctuations in prices, and (2) it should be as close as possible to the commencement of the Five Year Plans. A study of the price movements during 1947-53 revealed that 1952-53 was compa

tively a stable year during this span..

The weighting pattern was based on the production of various commodities in 1948-49 although the price-base was 1952-53. The weights assigned to various commodities were derived from the estimates of marketed values of domestic produce and the values of imports inclusive of duty. For manufactures, the figures were taken from the *Census of Manufacturing Industries, 1948* and imports were also taken into account.

Commodities were classified according to the Standard International Trade Classification and were grouped into six groups viz., food articles, liquor and tobacco, fuel, power, light, and lubricants; industrial raw materials; and manufactured articles classified into intermediate products and finished products.

The existing (revised) index is calculated by the Laspeyres' formula. The commodity index is arrived at as the simple arithmetic average of the price relatives of the various quotations while the sub-group and group indices are derived as weighted arithmetic means of commodity indices. The general index is worked out as a weighted average of the group indices.¹ Monthly averages are worked out as average of the weeks both for individual commodities and for groups. The annual averages are worked out as simple averages of the monthly figures. The existing (revised) index is being published weekly in *Index Number of Wholesale Prices in India* (revised series).

New Series of Index Numbers of Wholesale Prices (1961-62 as base):² The existing series as described in the preceding paragraphs is being replaced by a new series on index number

1 Symbolically, the index is represented in the following manner :

Let P_{ijk} denote the price of i th commodity in the j th week of the k th year and P_{i0} , the corresponding average price of the i th commodity in the base year. Let also W_{i0} be the weight attached to the i th commodity based on estimates of marketed values of domestic produce. The general index for the j th week of the k th year (I_{jk}) is then :

$$I_{jk} = \frac{\sum W_{i0} \frac{P_{ijk}}{P_{i0}}}{\sum W_{i0}} \times 100$$

2. For details, see *A Note on the Index Number of Wholesale Prices in India, (New Series), Office of the Economic Adviser, 1969.*

of wholesale prices in India with base 1961-62 as base. The new series is largely based on the recommendations of the Wholesale Price Index Revision Committee and covers a number of additional items, especially in the manufactured category, which have assumed greater importance in the Indian economy and their incorporation is expected to go a long way in improving the coverage. The base has also been shifted to a more recent year, namely, 1961-62. The year 1961-62 has been taken as base because it was a period of comparative stability when compared to the earlier years, besides its being the first year of the Third Five Year Plan.

The new series covers 139 commodities comprising of 774 quotations as against 112 commodities and 555 quotations in the existing (revised) series. Also, as compared to the existing series which contains 5 groups of commodities, the new series contains 7 groups including two more groups, namely, "Chemicals" and "Machinery and Transport Equipment" which were shown as sub-groups under "Manufactures" in the existing series. The table on next page lists the groupwise distribution of commodities, markets and quotations in the existing and the new series.

The choice of specifications and markets for the commodities are based on an examination of the place of each commodity in the national economy and the representative character of the markets and varieties. The additions or deletions of agricultural commodities/specifications and markets in the new series were made in consultation with the Ministry of Food, Agriculture, Community Development and Cooperation. It would also be seen from the table that the expanded list of quotations and markets are more comprehensive in the new series than in the existing series of the index. Commodity-wise distribution has also been improved in the new series.

The weights assigned to various commodities in the new-series are based on the estimates of marketed values of domestic produce and the values of imports inclusive of duty, as in the existing series. Statewise production figures for most of the agricultural items were obtained from the Directorate of Economics & Statistics, and were valued at the harvest prices supplied by them. Wholesale prices were also used wherever the harvest prices were not available. Production figures of

TABLE
Comparative position of the number of commodities,
number of markets and number of quotations in the existing
and new series of index numbers of wholesale prices

Group	No. of commodities		No. of markets		No. of quotations	
	Existing Series	New Series	Existing Series	New Series	Existing Series	New Series
1. Food articles	31	38	105	128	216	275
2. Liquor and tobacco	3	3	5	6	10	12
3. Fuel, power light and lubricants	8	10	7	7	24	28
4. Industrial raw materials	23	25	37	47	84	106
5. Chemicals	*	11	*	6	*	16
6. Machinery and Transport Equipment	*	7	*	18	*	,83
7. Manufactures						
(a) Intermediate products	14	13	7	7	44	43
(b) Finished products	33	32	22	36	177	211
Total	112	139	—	—	555	774

*New Group.

items like spices were obtained from reports of the Agricultural Marketing Adviser, Government of India. To arrive at the marketable surplus in case of agricultural items, the retention ratios (percentage of production retained by the producer) were also obtained from the Office of the Agricultural Marketing Adviser for the latest year available with them. In the case of sugarcane, cotton raw and cotton yarn, the quantities consumed by the mills using them as raw material have been taken into account. In case of manufactured articles, the gross value of products for the year 1961 as given in the *Annual Survey of Industries* was taken into account. In the case of some items where production figures had not been given in the *Annual Survey of Industries* data were obtained from the annual report of the Director General of Technical Development, Government of India. Imports and excise duties were also added to the values wherever applicable, as these elements form part of the basic cost. As regards, Intermediate Products, only the portion produced for sale had been considered. In the case of electricity,

the weight was based on the energy sold by electricity undertakings and valued at the average All-India rate. The weights for "Mineral Oils" were based on consumption figures.

The weights for the groups in the new series as compared to the existing series are given below:

		New Series	Existing Series
(i)	Food Articles	413	504
(ii)	Liquor & Tobacco	25	21
(iii)	Fuel, power, Light & Lubricants	61	30
(iv)	Industrial Raw Materials	121	155
(v)	Machinery & Transport Equipment	79	...
(vi)	Chemicals	7	...
(vii)	<i>Manufactured Articles not elsewhere stated</i>	294	290
(a)	Intermediate Products	(57)	(41)
(b)	Finished Products	(237)	(249)
		1000	1000

It is seen from the table that the new system of weights reflects some important changes. The weight of the Food Group has decreased from 50·4 per cent to 41·3 per cent and that of Industrial Raw Materials from 15·5 per cent to 12·1 per cent while the weights for the Manufactured categories have increased from 29 per cent to 38 per cent and for "Fuel, Power, Light and Lubricants" from 3 per cent to 6·1 per cent. The shifting of weights from "Food" and "Industrial Raw Materials" groups in favour of "Manufactures" and "Fuel, Power, Light & Lubricants" is mainly due to relatively increased production in these groups and inclusion of a number of new items under "Manufactures" and "Fuel, Power, Light & Lubricants" groups.

The new series is computed on the principle of weighted arithmetic mean. Weekly quotations for the prescribed varieties on or about each Friday are collected. The price relatives are calculated as the percentage ratios which current price quotations bear to those prevailing in the base period. In other words, the price relative for each variety in a market is calculated by dividing the current price quotations by the corresponding base price (1961-62) and multiplying it by 100. The commodity index is arrived at as the simple arithmetic average of price

relatives of varieties in different markets. The sub-group or group index is derived as the weighted arithmetic mean of commodity indices and is worked out by first multiplying the index for each commodity by weights assigned to it and then by dividing the totals of these multiplications by the total weights of the relevant sub-groups or groups. Similarly the All-Commodity Index is computed as the weighted arithmetic mean of group indices by multiplying the group indices by weights assigned to them and then by dividing the totals of these multiplications by the total weights of the relevant groups.

In order to maintain continuity in the Index Number of Wholesale Prices, the new series is to be linked by suitable conversion factors for the base period in respect of individual commodities and the general index. The indices of All Commodities in the two series are linked on the basis 100 of the new series=125·1 (being the average of 1961-62 of the existing series). The items and groups of the new series are broadly comparable to the items and the groups of the existing series after certain adjustments where necessary.

Consumer Price Index Numbers

The Consumer Price Index Number is generally intended to show over a time the average percentage change in the prices paid by the ultimate consumers belonging to the population supposed to be covered by the index. The average percentage changes in the prices to be reflected by the index is in respect of a fixed list of goods and services consumed by the group of population and is calculated month by month. The fixed basket of goods and services constitutes from the viewpoint of consumption the level of living of the concerned population group. It has to be noticed that index does not measure the absolute level of prices but only the percentage change in prices of a fixed basket of goods and services at a different period of time. It also does not measure changes in total expenditure of the population group. The cost of living of the population group is affected by a large number of factors, namely, income, change in the money, manner of living, changes in quality of commodities, service consumed, prices etc. The most important factor determining the changes in the cost of living of

the population group is 'however' changes in prices of goods and services consumed. The consumer price index number is designed to measure only one particular aspect of the cost of living, that is, the effect of price change. The uses of consumer price index numbers are wide and varied. Apart from the fact that there is a relation between dearness allowance and the cost of living indices, these affect the purchasing power of the money and provide a measure of real money income. At the Government level, these are used in determining general economic policies, particularly in respect of wages, prices and taxation. In addition, these index numbers act as a useful guide for wage fixation and wage agreement by Industrial Tribunals and Wage Boards. Here are some of the considerations in the construction of consumer price index numbers :

- (1) the specific group or class of population and the area which Consumer price Indexes (CPI) represent should be clearly demarcated and the base year should be a normal year ;
- (2) the weights used should indicate the importance attached to the percentage changes in the prices paid by the consumer for different items of consumption, including services. The weight is to indicate only percentage of expenditure on each item of goods and services in relation to total expenditure. Weights adopted are to be based on consumption pattern of a class of population at a particular centre or area under study.

The data on consumption pattern are collected through the family budget enquiries. In family budget enquiries data are collected on many aspects of family living, but data most relevant for obtaining weights for CPI are data on expenditure on those goods and services consumed by families which can be valued in terms of money. The family budget enquiry is conducted on a sample basis and these families belong to a specific group of population for which the index is to be maintained.

Method of computation: The computation of index number according to Laspeyres' formula is done in the following manner :

For each item, an average price for the base period is cal-

culated on the basis of the weekly prices reported month after month for the entire period. This base period price of each item is kept fixed. For the current period, i.e., the month for which the index is computed, again an average price of each item is calculated by taking a simple arithmetic average of weekly quotations received during the month. The ratio of the price for the current month to corresponding base period price gives a measure of the price changes for each item for the current month when compared to the fixed base period. The ratio for each item is expressed as a percentage by taking base price as true and this percentage is called the price relative and is calculated separately for each specification of an item and then a simple average of these price relatives is taken to denote the price relative of the particular item.

The price relative of each item is then multiplied by its weight, the sum of these for all items in a group is divided by the sum of the weights for the group and the resultant figure is the group index.

In the second stage the group index numbers are also multiplied by their respective group weights and the sum product is again divided by the sum of the weights of each group. This gives the general index.

At present there are three different series of consumer price index numbers compiled at the all-India level viz. :

- (a) Consumer price index for industrial workers,
- (b) Consumer price index for non-manual employees,
- (c) Consumer price index for agricultural labour.

Consumer price index for industrial workers :—Earlier the Labour Bureau was compiling an interim series of all-India working class consumer price index with 1949 as base. It was first published with effect from April 1954 although it covered the series from 1944 onwards. It was obtained as a weighted average of working class consumer price index for 27 centres¹ out of which 15 centres were covered by the Labour Bureau and the rest by the State Governments. These 27 centres were not selected on any consideration in respect of all-India index but

1. Delhi, Ajmer, Jamshedpur, Dehri-on-Sone, Monghyr, Cuttack, Behrampur, Gauhati, Silchar, Tinsukia, Ludhiana, Akola, Jabalpur, Kharagpur, Bombay, Ahmedabad, Sholapur, Jalgaon, Nagpur, Madras City, Bangalore city, Mysore city, Trichur, Kanpur, Calcutta and Howrah.

were merely those for which a series existed. For the purpose of compiling all-India index, these 27 centres were first shifted to the common base *i.e.* calendar year 1949 by simple arithmetic conversion. A weight was assigned to each centre in proportion to factory employment of each of these centres. The index of each centre for a month was multiplied by its weights and sum of product was divided by the sum of the weights of each centre to yield the all-India index. The all-India index so computed essentially related to factory workers.

New Series of Consumer Price Index for Industrial workers : Realizing the limitations of the interim series and the need for more representative index numbers based on uniform and scientific technique, a new index with base $1960=100$ is being constructed for industrial workers. These index numbers are based on the results of the fresh family living surveys in 50 industrial centres¹ conducted during 1958-59 by the Labour Bureau.

The weighting diagram for each new series of consumer price index for industrial workers is based on the average expenditure pattern of families including also single member families of industrial workers as available from family living surveys, 1958-59. The entire expenditure as revealed by the family living surveys has been included in the weighting diagram except for the non-consumption expenditure such as taxes, interest, remittances, litigation and also the non-priceable expenditure such as subscription, gifts, and payments for the services of priests etc.

As against 40 to 70 items included in the consumer price indices of different centres in the interim series, the present

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1. Labac, Mariani, Doom Dooma, Rangapura, Digboi (all in Assam) ; Calcutta, Howrah, Raniganj, Asansol, Jalpaiguri, Darjeeling (West Bengal) ; Kodarma, Jamshedpur, Noamundi, Jharia, Monghyr (Bihar) ; Sambalpur, Barbil (Orissa) ; Hyderabad, Guntur, Gundur (Andhra Pradesh) ; Madras, Coimbatore, Coonoor, Madurai (Tamilnadu) ; Mundakayam, Alwaye, Alleppay (Kerala) ; Bangalore, Elikmagulur, Ammathi, Kolar Gold Field (Mysore) ; Bombay, Sholapur, Nagpur, (Maharashtra) ; Ahmedabad, Bhavanagar (Gujarat) ; Gwalior, Indore, Balaghat, Bhopal (Madhya Pradesh) ; Kanpur, Varanasi, Saharanpur (Uttar Pradesh) ; Jaipur, Ajmer, (Rajasthan) ; Amritsar (P.) Yamuna Nagar (Haryana) ; Srinagar (Jammu and Kashmir) . Delhi.

series cover about 100 items. Weights of items not included in the computation have been imputed to those items included in the index which have similarity of price pattern.

Representative markets for each centre have been marked for regular collection of prices on the basis of market, enquiries conducted at each centre. From each selected market prices are collected from two shops every week. In case of few standardised items such as tea leaves, cigarettes, barber charges, toilet soap etc. prices are collected once a month. The prices are collected by the subordinate staff of the State Government departments as a part-time assignment. Data are collected by personal visits to the selected shops on the fixed price-collection day. In case the price quotations are not available from the selected shops data are collected from the alternative shops in the reserve list. The price collection work is supervised by price supervisors who are also officials of the concerned State Governments.

The index numbers have been computed on the basis of Laspeyres' formula. These index numbers have been compiled and published for most of the centres. The index numbers are being published regularly since December 1962 by the Labour Bureau in their Publication '*Indian Labour Journal*'.

Consumer Price Index Numbers for non-manual employees : As has already been indicated middle class family living surveys were undertaken in 1958-59 with the help of the National Sample Surveys in 41 Centres¹ to provide a base for a series of consumer price index numbers for non-manual employees under the guidance of the Technical Advisory Committee for Cost of Living Index Numbers. The index numbers for non-manual employees are compiled by the Central Statistical Organisation with 1960 as base for each centre separately and for all-India. The items

-
1. Hyderabad-Secunderabad, Kurnool, Vijayawada, Waltair, Vishakhapatnam, (all in Andhra Pradesh); Gauhati, Shillong (Assam), Muzaffarpur, Patna, Ranchi (Bihar), Ahmedabad, Rajkot (Gujarat), Srinagar, (Jammu & Kashmir) Kochi (Kozhikode), Trivandrum, (Kerala), Bhopal, Gwalior, Indore, Jabalpur (Madhya Pradesh); Bombay, Nagpur, Poona (Maharashtra); Madras, Madurai, Tiruchirapalli, (Madras), Bangalore, Gulbarga, Hubli-Dharwar, Mangalore (Mysore), Cuttack, Bhubaneshwar, Sambalpur (Orissa); Amritsar (Punjab); Chandigarh (Chandigarh) Ajmer, Jaipur, Jodhpur (Rajasthan); Agra, Allahabad, Kanpur, Lucknow, Meerut (Uttar Pradesh); Calcutta, Kharagpur (West Bengal); Delhi (Delhi); Simla (Himachal Pradesh).

have been grouped into the following five groups and 23 sub-groups.

- I. Food, beverages and — Cereals ; pulses ; fats and oils ; meat, fish and eggs ; milk and milk products ; condiments and spices ; fruits and vegetables ; sugar ; non-alcoholic beverages ; prepared meals and refreshments ; pan, supari and tobacco.
 - II. Fuel & light
 - III. Housing
 - IV. Clothing, bedding and footwear
 - V. Miscellaneous
- Fuel and light
 — Housing
 — Clothing and bedding, footwear
 — Medical care ; education and reading ; amusement and recreation ; transport and communication ; personal care and effects ; household requisites ; others.

Method of construction : The price relatives for each item included in the weighting diagram of a particular centre are computed by chaining together a series of successive links each representing the average change in the prices of the item as compared to the preceding month. The price link for each item for a given month is obtained as an arithmetic average of the corresponding price relatives for the various quotations. In computing the price relatives at the quotation level, due note is taken of the substitutions of the variety/shop. The price relatives thus obtained for each item are weighted by the expenditure weights derived from the 1958-59 survey and averaged to provide the index at the sub-group, group, and overall level.

In preparing the index, special treatment has been given to highly seasonal subject of fruits and vegetables. In matter of pricing varying seasonal basket of goods has been used. Weights have been assigned to each item of fruits and vegetables on the basis of monthly expenditure on them as revealed by the family living survey, 1958-59. The weights of fruits and vegetables vary from month to month and from season to season although the total weight of the sub-group is kept constant, being based on the average expenditure on fruits and vegetables over the whole year in the base period. The prices of fruits and vegetables for a particular month of the current year are compared with the prices prevailing in the base year.

The index numbers for housing are based on a current house rent survey organised through the National Sample Survey

in half yearly rounds at each of the 45 centres. Data on house rents are collected in this survey once in six months from a fixed sample of middle class family dwellings. Index numbers are computed by chaining the average links based on round to round comparisons of comparable quotations.

Limitations of the two series of consumer price index numbers : Generally the period of the family budget enquiry is taken as the base period of the consumer price index number. The family budget enquiries for these indices were conducted in 1958-59 but the base year for these index numbers is 1960. The collection of price data in the case of consumer price indices for industrial workers through part-time paid employees of the State Governments may not give satisfactory price data since the Labour Bureau does not have any administrative control over them. The specification of a particular commodity for different quotations is different and their further substitution by a different specification or shop creates certain difficulties.

Consumer Price Index Numbers for Agricultural Labour (interim series) : The Minimum Wages Act, 1948, as applicable to employment in agriculture, provides for fixation as well as revision of minimum wages in accordance with the movement of cost of living index numbers for agricultural labourers. It was, therefore, decided in consultation with the Planning Commission to construct these cost of living index numbers and the work was entrusted to the Ministry of Labour and Employment. Since September 1958, the work was transferred to the Labour Bureau, Simla.

The original series of consumer price index number was constructed with the year 1950-51 as base. The weighting diagram and base prices were obtained from the first Agricultural Labour Enquiry, conducted by the Ministry of Labour and Employment from March 1950 to February 1951. The series, however, started from September 1956 and continued up to August 1964.

The series was constructed on the basis of the rural retail price data collected by the National Sample Survey. From the 11th (commencing August 1956) to the 13th rounds (up to June 1958), data were collected from a sample of about 300 villages. In the 14th round (July 1958 to June 1959) data were collected from 400 villages which were covered in alternative months i.e.,

200 in one month and 200 in the other. During the 15th round 800 villages were covered every alternate month.

The base period for the interim series of consumer price index numbers for agricultural labourers was the period from March, 1950 to February, 1951 which synchronised with the period of the surveys into family budgets of agricultural labourers as part of the First Agricultural Labour Enquiry. This enquiry provided the monthly expenditure of the sampled agricultural labour families¹, for a period of 12 months. On the basis of these, the average annual expenditure per family at the State level and all-India was obtained.

Base Prices : Retail prices of important commodities commonly consumed by agricultural labourers were collected during the 1950-51 enquiry for a period of 12 months from 800 villages spread over the whole country. In this enquiry, house-rent was not included as most agricultural labour families lived in owned or freely provided houses.

Construction of index numbers : The construction of consumer price index numbers was done in two stages, viz., (i) construction of index numbers for each of the reorganised States and (ii) construction of all-India index numbers on the basis of the State indices after suitably weighing them. The Union Territories of Delhi and Himachal Pradesh were grouped with the adjoining State of Punjab and those of Manipur and Tripura with Assam.

The average prices prevailing in each one of the States were worked out. Taking these as current prices, the index numbers for each State were obtained by using the following variant of Laspeyres formula:

$$I_n = \frac{\sum P_o Q_o \times \frac{P_n}{P_o}}{\sum P_o Q_o}$$

where P_n is the current average price in the State, P_o , the corresponding base period price and Q_o , the average quantity consumed by an agricultural labour household in that State

1. An agricultural labour family was defined as one in which either the head of the family or 50 per cent of the earners reported agricultural labour as their main occupation.

during the base year. The summation was done separately for each expenditure group and extended over all commodities within each group. In this manner, the four group indices for each State were obtained. The general index for each state was then obtained by weighting these group indices with the corresponding group weights. The all-India index numbers were compiled by weighting the State indices by the estimated expenditure (average household expenditure multiplied by the estimated number of agricultural labour households) in the different States. The indices for each state were published in the *Indian Labour Journal*.

Consumer Price Index Numbers for Agricultural Labour-new series: The second all-India Agricultural Labour Enquiry was conducted in 1956-57. A revised series of consumer price index numbers with the agricultural year 1956-57 as weighting base and 1960-61 as comparison base has been started from September, 1964 (first published in the November, 1964 issue of the *Indian Labour Journal*). The new weighting diagrams have been prepared for this series for each State on the basis of second Agricultural Labour Enquiry.

Since the villages from which the current price data are collected are fixed in the case of revised series, price relatives are computed at the village level and averaged to produce average relatives at the zonal level (subdivisions of States). The price relatives so obtained at the zonal level are weighted by the estimated aggregate expenditure of agricultural labour families in the zone on the item concerned and averaged to produce the average relatives at the State level. The State index is computed as a weighted average of the average price relatives. All-India indices for groups and all commodities are compiled as weighted averages of the state indices with weights proportional to the estimated aggregate expenditure of agricultural labour families in the State. The indices cover about 65 items.

Index Number of Security Prices

Official series of index numbers of security prices were first compiled and issued by the Office of the Economic Adviser with the financial year 1927-28 as base, and they relate to the

1 April, 1927-December, 1949. These indices used to be compiled on a monthly basis upto November 1945, thereafter

weekly series were compiled and issued.

The Economic Adviser's Index Numbers relate to three main groups viz., *Fixed Yield Government Paper*, *Fixed Yield Industrial Securities*, and *Variable Yield Industrial Securities*¹. The word *yield* here refers to coupon rates in the case of Government of India securities and dividend rates in the case of industrial securities. The index numbers of Government securities were compiled using six quotations (quotations on Bombay and Calcutta markets in respect of three loans) on Government of India loans. The indices of *Fixed Yield* and *Variable Yield Industrial Securities* were compiled using 24 and 124 quotations respectively. The number of quotations included under any particular sub-group of *Variable Dividend Securities* was determined chiefly on the basis of aggregate paid-up capital of companies falling in each sub-group. The total value of output of each industry was also taken into consideration in the final distribution of weights and among the various sub-groups. Up to November, 1945, for compiling the index, one quotation was used to be taken for each security which related to a fixed day towards the end of the month. For the period subsequent to December 1945, the index numbers were based on one-day-a-week quotations. The quotations related to a fixed day towards the end of the week.

The Economic Adviser's Index Numbers were discontinued at the end of December 1949, when the work of compiling and publishing the official Index Numbers of Security Prices was transferred to the Reserve Bank of India.

The Reserve Bank of India Index Numbers of Security Prices were compiled with the calendar year 1938 as base. These were first published in January 1946. The official lists of quotations issued daily by the Stock Exchanges at Calcutta and Madras and by the Native Share and Stock Brokers' Association, Bombay, were used in compiling these index numbers. Weekly index numbers were compiled using averages of daily quotations. Monthly and annual figures were averages of

1. The industrial groups covered are: Govt. securities; fixed yield industrial securities—jute, tea, coal, cotton, sugar, paper, transit and miscellaneous; variable yield industrial securities—banks, insurance, electricity and telephone, transit, railways, cotton, jute, cement, iron and steel, engineering, sugar, breweries, paper, tea and coal.

weekly indices.

Separate group and sub-group indices used to be compiled for three classes of securities, viz., *Government and semi-Government Securities, Fixed Dividend Industrial Securities and Variable Dividend Industrial Securities*. The group index for *Variable Dividend Industrial Securities* was based on quotations of 292 scrips belonging to 18 industries¹ and 20 other miscellaneous shares in respect of which no separate index was constructed. The group index for *Fixed Dividend Industrial Securities* covered only 8 industries.² 62 scrips relating to these 8 industries and 4 miscellaneous scrips were included in this group index. *Government and semi-Government Securities* covered Government of India loans, loans of Part B States, Municipal, Port Trust and Improvement Trust Loans, the total number of scrips used being 20.

For compiling the weekly indices, the price relatives were worked out for each scrip by calculating the ratio of average price for each week to that of the preceding week. For the first week of January 1946 (when the index started) the price relatives were based on the average prices for the calendar year 1938, which was taken as the base period. The link relative for each sub-group for each of the three centres, Bombay, Calcutta and Madras, was the unweighted geometric average of the price relatives of all the scrips falling within the sub-group. The all-India link relative for each sub-group was formed by taking the weighted arithmetic mean of the corresponding regional link relatives. The three group link relatives for each centre and for all-India were formed by taking the weighted arithmetic average of corresponding sub-group link relatives. The all-India group and sub-group index numbers and the regional group index numbers were formed by serial multiplication of the corresponding link relatives of consecutive weeks commencing from the first week of January 1946.

In respect of *Government and semi-Government securities*

1. Banks, insurance, investment trusts, electricity and tramways, railways, shipping and other transport, cotton, woollen and silk, jute, iron and steel, cement, sugar, breweries, general engineering, chemicals, paper, mining and oil, plantations and coal.

Iron and steel, jute, electricity, cotton, plantations, sugar, paper and coal.

ties the weights used were proportional to the average out-standings of the loans during 1946. For variable and fixed Dividend Industrial Securities, the weights were proportional to the paid-up capital of all concerns (belonging to the corresponding sub-groups) whose scrips were traded in the principal Stock Exchange of the Centre concerned.

Index Numbers of Security Prices—Revised Series : The index number of security prices was further revised from July 1957 with comparison base shifted to 1952-53=100 and the weight base to 1956-57 i.e., the revised index numbers were compiled with base 1952-53=100, using a system of weights relating to the year 1956-57. The old series with the base 1949-50 was discontinued after June 1958. In this revision, the list of securities were revised taking into account the large number of new securities that had come on the market since the last revision. The number of securities selected under the different groups was as follows :

Government and semi-Government—41 ; debentures of joint-stock companies—38 ; preference shares—116 ; and variable dividend industrial securities—317.

In the all-India series, variable dividend industrial securities were classified into 7 main divisions and 29 sub-divisions conforming as closely as possible to the *International Standard Industrial Classification*.

For Government and semi-Government securities, weights were proportional to their outstandings at the end of 1956-57. For debentures, preference shares and variable dividend securities weights were proportional to the market value of outstandings/share capital of all industrial concerns (belonging to the group/sub group) quoted on the respective stock exchanges during the year 1956-57.

The method of compilation was the same as followed for the old series. The weekly index numbers were compiled by chain-base method based on the weekly average prices of individual securities. The sub-group indices in a region were compiled as the unweighted geometric averages of the price relatives of all the securities included in a sub-group. The all-India sub-group indices were weighted arithmetic averages of the regional sub-group indices, and the all-India main group indices were weighted arithmetic averages of all-India sub-group

indices.

In the old series, the comparison base and the weight base were the same viz., the year 1949-50. For the revised series, it was decided to have 1952-53 as the base year because it was a year of very little price fluctuations and coincided with the year recommended as base year for all index numbers by the "Working Party on the Base Periods of Official Index Numbers". It was, however, considered desirable to select a more recent year than 1952-53 for purposes of weighting for taking into account the coming up of new companies in the country. Moreover, the nationalisation of the Imperial Bank of India in 1955 and the life insurance companies in 1956 and the large number of new shares that were floated during 1952-53 and 1956-57, made substantial shifts in the weight pattern of industrial securities over the period. It was, therefore, found that it would be most appropriate to adopt 1956-57 as the weight base year for this revised series of index numbers.

Third Revision of the Index Numbers of Security Prices¹: Since the second revision of the series in 1958, a large number of securities came on the market and some old ones ceased to be quoted. Out of 512 scrips included in the second revised series, 18 government and semi-government securities, 4 preference shares and 11 ordinary shares were deleted as and when these scrips ceased to be quoted on the stock-exchanges. Between March 1957 and March 1962, the total number of rupee companies whose ordinary shares were quoted on Bombay, Calcutta and Tamilnadu stock exchanges had increased from 951 to 1081 and the market value of all these shares was more than doubled during this period. Besides, the listing of a large number of new scrips on the stock exchanges had brought about a change in the relative position of different sub-groups. Some of the companies had also diversified their activities with the result that the old classification needed revision. Further, the number and composition of government and semi-government securities and debentures listed on the stock exchanges had also undergone considerable change.

Another important factor which called for revision was

For details, see, *Reserve Bank of India Bulletin*, October 1965, pp. 1506-1521.

remoteness of the base period 1952-53. For all these reasons, another revision was made in the index number of security prices with the base shifted for the third time to 1961-62. In the revised series, Ahmedabad has also been included in addition to the four centres viz., Bombay, Calcutta, Delhi and Tamilnadu for the purpose of selection of scrips.

In compilation of the index, 578 scrips have been included in the third revised series. These scrips were selected from those quoted at the five exchanges on the basis of the importance of concerns to which they related, and their activity in the market. The number of scrips selected under the different groups is as follows : government and semi-government securities—48, debentures—36, preference shares—119 and variable dividend industrial securities—375.

The grouping of selected scrips is broadly on the lines of the Standard Industrial Classification proposed by the Central Statistical Organisation. The revised series present data for 5 groups and 33 sub-groups in respect of ordinary shares.

For government and semi-government securities, weights are proportional to the amounts outstanding as on 31st March, 1962. In case of debentures, preference shares and variable dividend industrial securities weights are proportional to the average market value of outstandings/share capital of all companies belonging to the group/sub-group and quoted on the respective Stock Exchanges on 31st March, 1962. The average market value is worked out by multiplying the number of debentures/shares by the average of 12 mid-month price quotations during the base year. In respect of scrips selected at more than one centre suitable adjustments have been made in the all-India weights to avoid double counting.

The method of compilation of the indices for the third series is the same as that for the second series. The weekly price of each scrip is obtained by averaging the daily closing quotations. Price relative for a scrip during a particular week is obtained by dividing the weekly average price for the immediately preceding week. For the first week, the price relatives are based on the base year average prices. The unweighted geometric average of the price relatives of the scrips included in sub-group at each centre is the link relative for the sub-group at t centre. These link relatives are then forged into a cha

serial multiplication to get the sub-groups index for that centre. The regional group and main group indices are obtained by taking the weighted arithmetic averages of the regional subgroup indices and the all-India group and main group indices are the weighted arithmetic averages of the all-India sub-group indices.

Index numbers of Purchase Prices

The Directorate General of Supplies and Disposals (DGS&D) makes bulk purchases of the requirements of Central Ministries, Government Undertakings, and at times of the State Governments, Projects and Local Bodies. These purchases run into a few hundred crores of rupees every year. Since the DGS&D is interested to know generally the increase in the prices it pays for the purchase of stores from year to year and to keep a close watch on the extent of fluctuations in the prices for the procurement of stores, it was decided to work out index numbers of contract prices (that is, the prices on which contracts are given by the DGS&D for the supply of stores), for such items of stores which have repetitive demand. It was expected that such an index number series, if maintained continuously, would serve broadly the following objectives:

- (i) it would reveal the broad trends of fluctuations of procurement prices in respect of several important groups of stores and would thus provide a useful guide to the past events and help in watching current price arrangements,
- (ii) it would enable to judge the role of the Central Purchase Organisation in bringing about the gradual transformation in the country's industrial structure which is being induced through the stores purchase policy of the Government, and
- (iii) around these index numbers and those issued by other agencies of the Government, it would be possible to build up an incisive account of the several aspects of the country's developing economy.

Keeping these broad considerations in view, a pilot study was undertaken in January 1958 to construct these indices for the year 1956-57 with 1953-54 as the base. Later on, index numbers of contract prices for the years from 1957-58 to 1960-61 were also constructed and published by the DGS&D in their

publication '*Index Numbers of Contract Prices*'. These indices were constructed by the Laspeyres' formula in which the weights were assigned on the basis of the corresponding value of purchases as obtained from the '*Annual Administration Report*' for the base year. Indices were prepared separately for indigenous and imported items and overall.

In 1961, the DGS&D decided to revise the base period of the index numbers to 1960-61 and to redesignate them as 'index numbers of purchase prices' instead of 'index numbers of contract prices'. A few other changes were also made in the groups and items of stores. For calculation of weights, the weights pertaining to the groups of stores not selected were suitably allocated to the allied groups of stores and within a group to the allied items. The indices are being constructed on the basis of above revisions from 1961-62 onwards. These are published in the *Index Numbers of Purchase Prices* for each year, separately.

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Introduction

In this chapter, our main concern is to describe the various sources and publications relating to the statistics of money and banks in India. The particular emphasis will be upon the banking system which is the pivot of any financial mechanism. The statistics described in this chapter are of varied kinds. They include data on assets and liabilities of banks ; investments, advances and deposits of banks ; debits to deposit accounts ; and money supply with the public.

These data lend themselves to a number of uses. For example, persons interested in a particular bank may compare its financial statements with combined statements for a large group of banks. Also a knowledge of the number of banks, their characteristics and location may help those who look to banks as their customers. Data on interest rates are extremely useful to borrowers and lenders. In addition to such direct uses, these statistics have special significance to the businessman, the economist and the government in that they are of assistance in the formulation of economic and financial policies. They are also required for national income estimation from this industry.

Banking Structure

(i) Before discussing the sources and publications of banking statistics, it will be helpful to give a brief description of the various types of banking institutions in India.

Reserve Bank of India : In accordance with the provision of the Reserve Bank of India Act, 1934, the Reserve Bank of India was established on April 1, 1935 as the Central Bank of the country. On its inception, the Bank took over the liabilities and assets of the Paper Currency Department of the Government of India, which was till then the currency authority of the

country. It also took over from the Imperial Bank of India the work relating to banking transactions for the Government. After the separation of Burma on April, 1937, the Reserve Bank of India functioned as the currency authority of that country till June 5, 1942 and as bankers to the Government of Burma till March 31, 1947. After the partition of the country, the Bank rendered central banking services to the Dominion of Pakistan till June 30, 1948. The Bank was nationalised on January 1, 1949 in pursuance of the Reserve Bank (Transfer to Public Ownership) Act passed by Parliament on September 3, 1948.

(ii) *Scheduled commercial banks*: Scheduled banks are banks included in the Second Schedule to the Reserve Bank of India Act, 1934. Banks which carry on the business of banking in India and which (a) have paid-up capital and reserves of an aggregate, real or exchangeable, value of not less than Rs. 5 lakhs, (b) are either companies defined in Section 3 of the Companies Act, 1956, or corporations or companies incorporated by or under any law in force in any place outside India or institutions notified by the Central Government in this behalf, and (c) satisfy the Reserve Bank of India that their affairs are not being conducted in a manner detrimental to the interests of their depositors, are eligible for inclusion in the Second Schedule to the Reserve Bank of India Act. Scheduled commercial banks are further classified into Indian Scheduled Commercial banks and Foreign banks according to their head offices being located in India or outside the Indian Union. The Indian Scheduled banks may now be further classified into nationalised and other banks. Scheduled banks enjoy certain facilities from the R.B.I., such as borrowings against approved securities, rediscounting of eligible bills, making remittances at concessional rates etc. Scheduled banks have, in turn certain obligations such as the maintenance of statutory deposits with the Reserve Bank and submission of weekly returns relating to their business in India, etc.

(iii) *Non-scheduled banks*: Non-scheduled banks are the banks which are not included in the Second Schedule of the Reserve Bank of India Act, 1934. The classification of these banks into A2, B, C and D banks, based on their paid-up capital and reserves has been discontinued with effect from 1st January 1955 for purposes of presenting data on non-scheduled banks.

statement of accounts and the annual balance sheet. In terms of Section 53 of the Reserve Bank of India Act, the Bank prepares in the form prescribed¹ a weekly account of the Issue and Banking departments as at the close of Friday and transmits it to the Central Government. This weekly statement is published after the weekly meeting of the Central Board. The Reserve Bank's balance sheet is also published in the same form as the weekly statement, except for the addition of a statement of profit and loss account.

The commercial banks in the country are also required to submit a number of returns to the Reserve Bank of India under various sections of the Reserve Bank of India Act and the Banking Regulation Act. Annexure 2 to this chapter enumerates the nature of these returns, sections under which they are required to be submitted, their periodicity and the type of banks which submit these returns. From these returns we get a wide variety of information. These include : Scheduled Bank's business in India, assets and liabilities of banking companies, advances at various rates of interest, ownership of deposits, investments, purposewise distribution of advances, debits to deposit accounts, ownership of Central and State Government securities, etc.

The weekly statements of the Reserve Bank of India together with the various statements submitted by the commercial banks broadly portray the financial trends both seasonal and long term, in the movements of money supply, bank credit, budgetary operations of the government, etc.

We now describe below some major publications in which the banking statistics appear.

(1) *The Reserve Bank of India Bulletin* : The *Bulletin* published monthly is, perhaps, one of the most important sources of data on banking, money and credit. It presents, in summary form, statistical and other information with a view to portraying the pattern of current economic trends in the country. The *Bulletin* also contains the results of various surveys and studies carried out by the different departments of the Reserve Bank. The *Bulletin* has a statistical section which presents current monetary and economic statistics. Some of these

1. The Balance Sheet of the Reserve Bank of India embodying figures is shown in Annexure 1 to this chapter.

statistics which are available on a weekly basis, are also published in a weekly statistical supplement to the *Bulletin*. Most of the series given in the *Bulletin* are given in greater detail in other annual publications of the Bank e.g., *Report on Currency and Finance*, and *Statistical Tables Relating to Banks in India*. A Supplement to the Reserve Bank of India *Bulletin* which contains explanatory notes in regard to definitions, sources, coverage, methods of compilation and limitations of the data presented in the 'Current Statistics' portion of the *Bulletin* is published from time to time and it was last brought out in July, 1967. Similar Supplements were brought out in June, 1953; July, 1956; July, 1958; February, 1961 and, November, 1963.

(2) *Report on Currency and Finance* : This Report is an annual publication. It was first published in 1937, in continuation, in somewhat extended form, of the *Currency Report* which used to be published by the Comptroller of Currency prior to the establishment of the Reserve Bank of India. The *Report* provides a factual review of developments of economic and financial importance as also of institutional changes in the various sectors of the Indian economy, supplemented by comprehensive statistics covering all sectors of the Indian economy during the financial year. The *Report* has three parts. Part I gives an overall review of the developments in the economy during the financial year. Part II deals in detail with the developments in the various sectors of the economy with a separate chapter for each of these, namely, output and price trends, money and banking, capital markets, budgets and public debt, trade and tariff developments, and currency and coinage. It also contains a few appendices which give in tabular form the details of the budget proposals, important export and import policy announcements, Tariff Commissions recommendations and India's trade agreements with foreign countries. Part III provides a wealth of statistical material on various sectors, including on money supply and banking.

This *Report* differs in scope and purpose from the two statutory reports of the Bank, namely, *Annual Report of the Central Board of Directors*, and the *Report on Trend and Progress of Banking in India*. The Bank is at present considering whether it should retain the present form of the *Report* or whether it should split it up into a number of separate problem-

oriented studies, covering different aspects of the economy.

(3) *Trend and Progress of Banking in India* : It is an annual publication of the Reserve Bank. It is issued in terms of Section 36 (2) of the Banking Regulation Act, 1949. It contains a review of major developments in the banking field during the calendar year (January-December) and discusses various measures for strengthening the banking industry. It also contains a useful table giving the trend and progress of banking in India, at a glance.

The Reserve Bank has a proposal to merge (or at least to synchronise) this publication with the *Annual Report of the Central Board of Directors*, which is submitted to the Government of India under Section 53 (2) of the Reserve Bank of India Act, 1934, reviewing primarily the monetary and credit policies of the the Bank and its operations in the background of economic conditions during the year ending June. The reason for merging these two publications is that there is some overlap and avoidable duplication between these two statutory Reports. This is expected to be done with effect from 1969 so as to present to the reader a connected view of the developments in banking and credit policies for the period under review.

(4) *Statistical Tables relating to Banks in India* : It is an annual publication of the Reserve Bank. It provides comprehensive data on the functioning of banks in India, whether registered in India or abroad. It is divided into three parts, namely, (i) Summary Tables, (ii) Detailed Tables, and (iii) Appendices. The Summary Tables give the more important items of assets and liabilities, and assets of the several classes of banks while particulars regarding individual banks are given in the Detailed Tables. The Appendices contain information on the location of offices of banks, and the centre-wise details of bank deposits and bank credits in India. This publication also has a table 'Statistics at a Glance' which show the progress of banking over a period of time. An abridged edition of this publication containing only the appendices is also published separately.

(5) *Statistical Tables relating to the Co-operative movement in India* : This is also an annual publication of the Reserve Bank. In order to reduce the time-lag between the end of the co-operative year to which the data relate and their publication,

as a first step it was considered desirable to divide the publication into two parts; Part I—Credit Societies and Part II—Non-Credit Societies. This was done with the issue for 1963-64. Part I presents details of credit societies at all the levels of the co-operative credit structure in the country—the State co-operative banks, central co-operative banks, primary credit societies, and land mortgage banks. The tables presented relate to (i) figures at a glance, (ii) progress of co-operative societies during the Plan periods, and (iii) number, member, and working capital by type of societies. It covers their financial position as on June 30 and operational details for the co-operative year.

Recently, a booklet entitled *Selected Statistics on Co-operative Credit* has been issued by the Agricultural Credit Department of the Reserve Bank. It contains important statistical data on co-operative banks and credit societies at all levels of the co-operative credit structure viz., state co-operative banks, central co-operative banks, primary credit societies - both agricultural and non-agricultural and land mortgage banks. It gives statistical data in regard to the progress made by the co-operative credit institutions during the three Five Year Plans.

(6) *Banking and Monetary Statistics of India (1954)* and *Supplement to Banking and Monetary Statistics of India (1964)*: The Reserve Bank published in 1954 a comprehensive volume on banking and monetary statistics of India incorporating at one place and on a uniform basis all the principal statistical series relating to banking, monetary, and other financial developments from the earliest available period to the end of 1951. The volume comprised 12 sections giving detailed statistics in respect of the Reserve Bank the commercial banks, co-operative societies, cheque clearings, money rates and security markets, small savings, public finance and public debt, currency and coinage, remittances, imports and exports of gold and silver, and insurance companies. The introductory notes explained the scope and limitations of the data and also gave the historical background.

The *Supplement* brought out in 1964 is intended to present these data upto 1961, covering the first two Plan periods and incorporating various changes that have taken place in these

New section on financial corporations, balance of pay-

- and bank debits have been added, and several refine-
- have been made in the series on money supply and

money rates and the data for them have been given from the earliest available period. There has not been any change in the presentation of data in the two volumes.

(7) Other Publications: *Statistical Abstract of the Indian Union* and *International Financial Statistics*: both annual publications, also contain useful information on banks. The *All India Rural Debt and Investment Survey 1960-61* is another important publication of the Reserve Bank. It contains useful information on total fixed capital formation - all India farm business, non-farm business and residential housing, total fixed capital formation by asset groups, capital expenditure on individual items of farm business, etc.

Bank Assets and Liabilities

A considerable share of available banking statistics is derived from the returns in the prescribed form¹ submitted by all commercial banks to the Reserve Bank under sections 25 and 27 of the Banking Regulation Act (Form XII) showing their assets and liabilities as at close of business on the last Friday of every month. This Act was extended in March 1950 and later in November 1956 to cover the whole of the Indian Union, including Jammu and Kashmir. Two Pakistani Banks viz., National Bank of Pakistan and Habib Bank, which were earlier classified as Indian scheduled banks were included with effect from July 1958 into foreign banks. The date for various years generally relate to the reporting banks and hence to this extent the figures for different periods become non-comparable. It should also be noted that in the present Form XII, liabilities and assets do not tally as they are confined to liabilities payable and assets held in India. The Committee on Banking Statistics has, therefore, suggested that information relating to foreign assets and liabilities of Indian branches of banks may be obtained in the monthly return on Form XII.

Data derived from these returns lend themselves in various ways to economic analysis. They throw light, for example, on

1. The prescribed form is Form XII since July, 1965. Earlier it was Form XIII and this Form was revised in September 1961 when some changes were made in the classification of the items.

the flow of bank credit into various loan and investment channels, and nature of bank deposits; and the relationship among assets, liability, and capital accounts.

The main items included in the assets and liabilities of the banks are given below¹:

TABLE

<i>Liabilities</i>	<i>Assets</i>
<i>Demand and Time Liabilities</i>	
1. Demand	1. Cash in Hand and Balances with Reserve Bank
(a) Deposits	(a) Cash in Hand
(i) Inter-banks	(b) Balances with RBI
(ii) Others.	
(b) Borrowings from banks	2. Balances with other banks in current account
(c) Others	
2. Time	3. Investments in government securities
(a) Deposits	4. Money at call and short notice
(i) Inter-banks	
(ii) Others	
(b) Borrowings from banks	5. Bank Credit
(c) Others	(a) Advances
3. Borrowings from Reserve Bank	(i) Loans, cash credits and overdrafts
(a) Against usance bills and/or promissory notes	(ii) Due from banks
(b) Others	(b) Bills purchased and discounted
4. Borrowings from State Bank and/or a notified Bank and State Governments	(i) Inland
(a) Demand	(ii) Foreign
(b) Time	

It should be mentioned here that the Committee on Banking Statistics has recommended the discontinuation of the classification of liabilities into demand and time liabilities. This is because of the fact that this classification, which was introduced at a time when the cash reserve requirements were

For detailed definitions, the reader is referred to the *Supplement to the Reserve Bank of India Bulletin*, July, 1967, pp. 3-5.

different for the two types of liabilities, is no longer necessary in view of the subsequent statutory amendment in terms of which there is now the application of a uniform cash ratio for demand and time liabilities.

Serial statistics relating to principal assets and liabilities are available in *Banking and Monetary Statistics of India*. Information on assets and liabilities are published regularly in the *Reserve Bank of India Bulletin*, the *Statistical Tables relating to Banking in India* and the *Report on Currency and Finance*.

Data are also available in respect of assets and liabilities classified according to their paid up capital and reserves and deposits, respectively.

Statistics relating to assets and liabilities are available separately for scheduled and non-scheduled banks. Further, figures are separately available for the State Bank of India. It would be appropriate in future that the statistics pertaining to the nationalised banks are also presented separately.

Deposits

There is a special interest attached to statistics on bank deposits. Geographical distribution of deposits may throw some light on the distribution of purchasing power. Also the share of deposits among various classes of banks help us in assessing the relative position of these banks in the banking structure of the country. From a study of growth in deposits, one can have an idea in regard to the improvement in banking habits of people. Statistical series showing the use of deposits have been developed, and special surveys are made annually of the ownership of deposits.

Much of the information on deposits is available from the weekly press communiques giving the consolidated position of liabilities and assets of the banks. The statistics on the nature and distribution of deposits are published in the *Reserve Bank of India Bulletin*, the *Statistical Tables relating to Banks in India*, *Banking and Monetary Statistics of India* (Part I), and the *Report on Currency and Finance*. Special reports of the Survey of Ownership of Deposits are published in the *Bulletin*. The *Statistical Tables relating to Banks in India* contains useful data on such items as ownership of deposits (with effect from 1965).

deposits by state and district (with effect from 1966 edition), and deposits of scheduled banks at various rates of interest.

At present the classification of deposits is not uniform. In the balance sheet and in some of the returns (for instance, Forms XI and XII of the Banking Regulation Act), deposits are classified into current,¹ savings and fixed, while some other returns (weekly return and survey of ownership of deposits) they are classified into time and demand deposits. The Committee on Banking Statistics² has recommended the desirability of having uniformity in classification of deposits into current, savings and fixed in all the returns as this is in conformity with the accounting practices of banks. They further suggested that these three categories of deposits should cover all deposit liabilities of banks and that a separate category 'other deposits' which is found in some returns (Form 4 (A)—*Statistical Tables relating to banks in India* and Form XI) should be discontinued.

Detailed series of the ownership of deposits is available. The survey of ownership of deposits relate only to deposits held in the Indian Union and covers current, savings and fixed deposits, special savings deposits, cash certificates, call and recurring deposits, overdue fixed deposits, credit balances in cash credit accounts and contingencies which are in the nature of deposits. The data are presented separately for foreign banks, State Bank of India, and other scheduled and non-scheduled banks, including Post Office savings banks and co-operative banks by type. The date of closing the accounts are not uniform for different classes of banks. For example, the data for commercial banks relate to year ended December, for co-operative societies to year ended June and for Post Office Savings banks to year ended March. Also the deposits in respect of commercial banks include those shown under contingency accounts, provident fund deposits, staff security deposits and chit and kuri deposits. The deposits of co-operative societies relate only to those from individuals and others.

1. Normally the amount of the current deposits includes the contingency accounts which in turn include the secret reserves of the banks. The quantum and movements of such reserves are not disclosed by the banks but they may be substantial. The statistics on current deposits should be considered with this limitation in view.

Reserve Bank of India Bulletin, May 1967, pp. 603-616.

Ownership of deposits has been classified into the following categories:

I. Business

(A) *Industry*

- (a) state-owned and/or state-managed concerns
- (b) limited companies
- (c) partnership and others

(B) *Trading*

- (a) state-owned and/or state-managed concerns
- (b) limited companies
- (c) partnerships and others

(C) *Financial*

(i) *Banks*

- (a) state-owned and/or state-managed concerns
- (b) limited companies
- (c) partnerships and others

(ii) *Cooperative Banks and societies*

(iii) *Insurance concerns and other financial institutions*

- (a) state-owned and/or state-managed concerns
- (b) limited companies
- (c) partnerships and others

(D) *Others*

- (a) state-owned and/or state-managed concerns
- (b) limited companies
- (c) partnerships and others

II. Personal (Individuals)

III. Professional

IV. Government and Quasi-Government Bodies

- (i) Central and State Governments
- (ii) Local authorities

V. Others

- (a) state-owned and/or state-managed concerns
- (b) limited companies
- (c) partnerships and others.

Information is also available of the average amount of deposits per account of scheduled commercial banks. Data are now also collected, through the survey on ownership of deposits, on the maturity-wise classification of fixed deposits on the basis of the original maturity of such deposits.

Advances and Investments

The funds collected by banks by way of deposits are used mainly for the purpose of making investments and providing loans and advances to trade and industry. Although, the more important source of finance available to trade and industry from banks is in the shape of loans and advances, the role of investments made by the banks in shares and debentures of companies engaged in such trade and industry should not be overlooked. From an overall economic point of view, the total credit supplied by banks to trade and industry consists of the investments in shares and debentures, and loans and advances.

A study of investments and advances is extremely helpful in assessing the role of banks in the economic development of the country. A further analysis of these items may throw some light on the role of banks in financing the private and public sectors.¹

Advances :

The survey of advances conducted regularly since 1948 by the Reserve Bank of India and the fortnightly data on advances classified by principal types securities collected from the offices of scheduled commercial banks under section 27(2) of the Banking Regulation Act, 1949 constitute the principal sources of data on advances.

Information on banks' advances according security are published in the *Reserve Bank of India Bulletin*, the *Report on Currency and Finance*, the *Trend and Progress of Banking in India*, and the *Monetary and Banking Statistics of India*. Data

1. Figures of loans and advances to private and public sectors are not available at present. Consequent on the recent nationalisation of major banks, it is suggested that this information is made available in future.

are available separately for secured and unsecured advances. Upto January, 1957, secured advances covered only advances against selected securities in respect of which the data were called for, while subsequent data cover all secured advances. Further, if an advance has been secured against more than one security, it is required to be split up on the basis of the proportionate value of the security to the total and the amounts shown accordingly against the appropriate securities. The securities are classified into the following main groups : (i) Food articles, (ii) Industrial raw materials, (iii) Plantation products, (iv) Manufactures and minerals and (v) other securities. These are further classified into sub-groups, numbering 35.

Data relating to advances of banks according to purpose¹ are available in the *Reserve Bank of India Bulletin*, the *Monetary and Banking Statistics of India*, the *Statistical Tables relating to Banks in India*, and the *Trend and Progress of Banking in India*. Bank credit is classified according to the use by/for (1) industry, (2) commerce, (3) financial institutions, (4) agriculture, (5) personal, (6) government, and (7) others (residual category), these are further classified into groups and sub-groups. The classification of advances, data is based, by and large, on the principal types of activity of the borrowers. The coverage of industry extends also to small-scale industry.

It is useful to mention here that the recommendations made by the Committee on Banking Statistics for improving the data collected through the survey of advances were incorporated in the survey return beginning from March, 1967. The recommendations were to (1) expand the coverage of the survey to include advances to Central and State Governments as well as local authorities, (2) enlarge the industrial sector to cover (a) construction and service industries and (b) professional accounts in addition to manufacturing industries, (3) transfer 'plantations' from the industrial group to the agriculture group, and (4) include data on (a) the size-wise classification of bank

1. Although one of main reasons of nationalising the major banks was their indulgence in making advances for speculative purposes, no statistics relating to such advances are presently available. It is hoped that such information is made available in future so that a close watch is kept on the elimination of such advances.

credit and (b) the medium term loans to the different sectors of the economy, on a regular basis. In view of the incorporation of these recommendations, the results of the earlier surveys are not strictly comparable with the results of the surveys since 1967.

Investments :

Detailed data on the investments made by scheduled and non-scheduled¹ banks are available. The information is collected by the Reserve Bank of India through a survey of investments (Form 2) conducted annually. These are published in the *Reserve Bank of India Bulletin*, the *Banking and Monetary Statistics of India*, and the *Statistical Tables relating to Banks in India*.

The investments presented in the tables in these publications are classified as follows :

I. Investments by offices in India

(A) Indian Government Securities

1. Central
2. State
3. Others (mainly postal)

(B) Other Domestic Investments

1. Other Trustee Securities
2. Fixed Deposits
3. Shares and Debentures of Joint-Stock Companies
4. Initial contribution to the share capital of Unit Trust of India
5. Units of Unit Trust of India
6. Others (excluding investments in real estate and bullion)

(C) Investments in

- (a) 1. Pakistan Securities
2. U.K. Securities

¹ Non-scheduled banks having total investment of more than Rs. 1 lakh are included.

3. Other countries' Securities
- (b) Other foreign Investments.

II. Investment by Foreign Offices of Indian Banks

1. Indian Securities
2. Pakistan Securities
3. U.K. Securities
4. Other countries' Securities
5. Other investments

Published figures are also available in respect of the maturity-wise distribution of investments of scheduled commercial banks in government Securities. The investments for this purpose are classified as : (i) 1 year, (ii) 1-5 years, (iii) 5-10 years, (iv) 10-15 years, (v) 15-20 years, and (vi) over 20 years. From such data, one can get an idea about the changes in the structure of the types of securities.

Debits to Deposit Accounts¹

Related to deposit statistics are statistics on 'bank debits' which means the total of debits to deposit accounts. When debits for a given period of time are divided by average bank deposits (against which the deposits are made) during the same period, we have a more direct and accurate measure of 'deposit turnover' than the data on cheque clearances because cheque clearances, although similar to debits, fail to include cheques or other debits which do not pass through a clearing house. 'Debits to Deposit Accounts' figures, used as an index of business confidence, should be used with great caution.

The Reserve Bank instituted in 1951 the Survey of debits to deposit accounts of scheduled banks and the returns (Form 5) obtained under these Surveys constitute the main source for the compilation of these data. With a view to obtaining a more precise idea of the volume of debits to accounts of individuals and business on the one hand and of government and quasi-government bodies on the other, separate data have been

1. For detailed definitions of various concepts, the reader is referred to the *Supplement to Banking and Monetary Statistics*, Vol. II, 1964.

collected since 1947. The current Survey of debits to deposit accounts also collects information on credits¹. Detailed data on deposits, debits and credit are available in the *Reserve Bank of India Bulletin* and the *Banking and Monetary Statistics of India*. Information on these items is further classified population-wise and state-wise and also according to the type of accounts.

For purpose of classification according to population, centres are classified into two main groups, namely, Group I centres with population above 1 lakh and Group II centres with a population below 1 lakh. Under each of these, again, there are three categories, namely centres with population: (i) below ten thousand and unclassified centres, called rural centres, (ii) between ten thousand and fifty thousand, called semi-urban centres, and (iii) between fifty thousand and 1 lakh under Group II, and centres with population (i) between 1 lakh and 5 lakhs, (ii) between 5 lakhs and 10 lakhs, and (iii) 10 lakhs and above under Group I.

Miscellaneous Statistics on Banks

Information is also available for both scheduled and non-scheduled commercial banks, and cooperative banks on items such as earnings and expenses; expenditure and distribution of profit of the several classes of banks; number of banks which have gone into liquidation or have ceased to function; number of operating branches and offices of commercial banks; cheque clearances and the number of cheques cleared; money rates; state-wise distribution of commercial banks; borrowings of scheduled commercial banks from the Reserve Bank of India; and unclaimed deposits held by commercial banks, etc. These are published in various publications of the Reserve Bank of India.

Money Supply with the Public

These statistics are important as the monetary and credit policy consists essentially in regulating the volume of money

¹ See *Reserve Bank of India Bulletin*, 'Debits to Deposit Accounts with Scheduled Commercial Banks, 1961-65', February, 1969, pp. 141-169.

supply with the public to suit the changing requirements of the economy.

The statistics of money supply with the public in India are published in the *Reserve Bank of India Bulletin*, the *Banking and Monetary Statistics of India* and the *Report on Currency and Finance*.

Money supply with the public comprises private holdings of currency, demand deposits held by the public in banks and other deposits with the Reserve Bank. The various items included in the Table on money supply with the public are :

I. Currency with the public [a+b+c-d]

- (a) Notes in circulation
- (b) Circulation of rupee coin
- (c) Circulation of small coins
- (d) Cash on hand with banks.

II. Deposit money with the public [e+f]

- (e) Net demand deposits of banks
- (f) 'Other deposits' with Reserve Bank

Total Money supply with the public [I+II]

The Tables on money supply with the public in the various publications include detailed footnotes stating the items which are included and excluded from time to time.

From August, 1967 onwards, data on money supply with the public do not include adjustment on account of 'balances held at treasuries' comprising of cash balances of Central Government in the Centrally Administered areas. Also no adjustments are made for the inward or outward movements of currency since no information on movements of Indian currency, if any, *vis a vis* other parts of the world is available.

In practice, the regulation of money supply is not wholly or even largely under the control of the Reserve Bank. There are a number of other factors which affect the money supply. The contribution of various factors affecting money supply are published on a comprehensive basis with effect from the issue of March 1968 of the *Reserve Bank of India Bulletin*. The principal factors affecting the money supply as given in the *Bulletin* are: (1) Net Bank Credit to Government Sector, (2) Net Bank Credit to Private Sector, (3) Net Foreign Exchange Assets of Banking Sector, (4) Government's Net Currency Liabilities to the Public, (5) Net Non-Monetary Liabilities of the Reserve

Bank, and (6) Non-Identifiable Net Non-monetary Liabilities of Banks (including some errors and omissions).

Bibliography

- (1) *Reserve Bank of India Bulletins* (monthly).
- (2) *Trend and Progress of Banking in India* (annual), Reserve Bank of India.
- (3) *Statistical Tables Relating to Banks in India* (annual), Reserve Bank of India.
- (4) *Report on Currency and Finance* (annual), Reserve Bank of India.
- (5) *Reserve Bank of India, Functions and Working*, Reserve Bank of India, 1958.
- (6) *Banking and Monetary Statistics of India*, Reserve Bank of India, 1954.
- (7) *Supplement to Reserve Bank of India Bulletin*, July, 1967.
- (8) *Supplement to Banking and Monetary Statistics of India*, Reserve Bank of India, 1964.
- (9) *International Financial Statistics* (annual), International Monetary Fund.
- (10) *Statistical Statements relating to Cooperative Movement in India* (annual), Reserve Bank of India.
- (11) *All India Rural Debt and Investment Survey, 1961-62*, Reserve Bank of India.

ANNEXURE I
RESERVE BANK OF INDIA
Balance Sheet as at June 30, 1966
ISSUE DEPARTMENT

LIABILITIES				ASSETS			
	Rs.	P.	Rs.	P.	Gold	Coin	and
					Bullion :—	(a)	Held in India
Notes held in the Banking Department ...	39,70,61,399.00				(b) Held outside India	115,89,24,794.75	
Notes in circulation ...	2867,48,14,694.00				India	...	...
Total Notes issued	2907,18,76,093.00				Foreign Securities	...	221,42,01,425.65
							—
					Total	...	337,31,26,220.40
					Rupee Coin	...	84,95,91,175.75
					Government of India	...	
					Rupee Securities	...	
					Internal Bills of Exchange and other Commercial Paper ...	...	2484,91,58,696.85
							...
all Liabilities	2907,18,76,093.00				Total Assets	...	2907,18,76,093.00

BANKING DEPARTMENT

LIABILITIES				ASSETS	Rs.	P.
Capital Paid-up	... ..	...	5,00,00,000.00	Notes	...	...
Reserve Fund	... ..	...	60,00,00,000.00	Rupee Coin	...	...
National Agricultural Credit (Long-Term Operations) Fund	... ..	...	115,00,00,000.00	Small Coin	...	...
National Agricultural Credit (Stabilisation) Fund	... ..	...	16,00,00,000.00	Dolls Purchased and Discounted :—	...	...
National Industrial Credit (Long-Term Operations) Fund	... ..	...	20,00,00,000.00	(a) Internal	...	...
				(b) External	...	...
				(c) Government Treasury Bills	...	...
				Balances held Abroad	...	...
				Investments	...	...
				Loans and Advances to :—		
				(i) Central Government	...	...
				(ii) State Governments	...	...
				Loans and Advances :—		
				(i) Scheduled Banks	...	...
				(ii) State Co-operative Banks	...	...
				(iii) Others	...	...
				Loans, Advances and Investments from National Agricultural Credit (Long-Term Operations) Fund	...	...
(c) Others	...	...	...

Bills Payable	..	..	..	..	34,18,42,509.41	(a) Loans and Advances to :—		
Other Liabilities	..	..	..	..	48,39,42,751.06	(i) State Governments	...	29,40,73,192.85
						(ii) State Co-operative Banks	...	14,95,86,086.01
						(iii) Central Land Mortgage Banks	...	...
					
						(b) Investment in Central Land Mortgage Bank Debentures	...	5,83,76,630.00
						Loans & Advances from National Agricultural Credit (Stabilisation) Fund	...	...
						Loans, and Advances to State Co-operative Banks	...	4,68,31,344.00
						Loans, Advances and Investments from National Industrial Credit (Long-Term Operations) Fund	...	...
						(a) Loans and Advances to the Development Bank	...	3,84,17,260.00
						(b) Investment in bonds/debentures issued by the Development Bank	...	...
						Other Assets	...	38,42,84,583.00
Total Liabilities	...	...	...	...	873,11,94,260.84	Total Assets	...	873,11,94,260.84

ANNEXURE II

**List of some important returns being submitted by Commercial Banks
to the Reserve Bank of India**

Department and Nature of Return	Section of the Act	Periodicity	Reporting Banks
I. Department of Banking Operation and Development.			
1. Scheduled Banks' Business in India.	Section 42(2) of Reserve Bank of India Act.	Weekly	All Scheduled Banks.
2. Credit Information (party-wise)	Section 45(c) of Reserve Bank of India Act.	Quarterly	... -do-
3. Remuneration to Directors ...	Section 10 (Rule 5) of Banking Regulation Act, (Form I).	Yearly	... All Commercial Banks.
4. Shareholdings of Chairman, Managing Directors, etc.	Section 12(4) of Banking Regulation Act, (Form II).	Initially and in case of change	-do-
5. Cash position of non-scheduled Banks.	Section 18 (Rule 10A) of Banking Regulation Act, (Form III).	Monthly	... Non-scheduled Banks.
6. Limits and outstanding amount of unsecured Loans.	Section 20 of Banking Regulation Act, (Form IV).	Monthly	... All Commercial Banks
7. List of offices opened/closed ...	Section 23 (Rule 13) of Banking Regulation Act, (Form IX).	Quarterly	... -do-
8. Maintenance of percentage of assets.	Section 24 of Banking Regulation Act, (Form X).	Monthly	... -do-
9. Uncollected deposits ...	Section 26 of Banking Regulation Act, (Form XI).	Yearly	... -do-

10.	Assets & Liabilities of Banking Companies.	Sections 25 & 27 of Banking Regulation Act, (Form XII).	Monthly	...	-do-		
11.	Assets and Liabilities of foreign offices.	Section 27 of Banking Regulation Act.	Monthly	...	Indian Banks having offices abroad.		
12.	Savings deposits - breakdown into No. 7 Scheduled Banks' Regulations. demand and time liabilities.	Half-yearly	...	All Scheduled Banks			
13.	Advances at various rates of interest.	Statistical return	Quarterly	...	20 selected scheduled banks.		
14.	Balance-Sheet and Profit and loss Account.	Section 29 of the Banking Regulation Act.	Yearly	...	All Commercial Banks.		
II. Deposit Insurance Corporation							
1.	Premia assessment & advance premium due.	Form I	...	Quarterly	...		
2.	Distribution of deposit accounts	Form II	...	-do-	-do-		
3.	Rates of interest on deposits (Minimum, Maximum and Usual rates).	Form III	...	Monthly	...		
4.	Distribution of deposits, rate-wise.	Form IV	Half-yearly	{ ... } Discounted from June 1967.	All Commercial Banks.		
5.	Distribution of deposit accounts	Form V	...				
III. Economic Department							
1.	Survey of ownership of deposits	Statistical (Form 1)	...	Yearly	...		
2.	Survey of investments	..." (Form 2)	...	-do-	-do-		
3.	Survey of advances (Purpose-wise)	..." (Form 3)	...	-do-	-do-		
4.	Statistical Tables relating to Banks in India.	..." (From 4A)	...	-do-	...		

Department and Nature of Return	Section of the Act	Periodicity	Reporting Banks
5. Earnings & expenses of banks	(Form 4B)	... do- do-	All Commercial banks.
6. Survey of debts to deposit accounts	" (Form 5)	... do- do-	All scheduled banks
7. Survey of advances—security-wise.	" (Form 7A & 7B)	.. Fortnightly	-do-
8. Survey of stocks of foodgrains ...	" (Form 8)	... Monthly	From selected offices of scheduled banks.
9. Survey of export & import bills,	"	... Quarterly	From banks which are Authorised dealers.
10. Survey of ownership of Central & State Government securities	"	... Yearly	Information obtained from all scheduled banks reporting holdings of Government securities on behalf of their constituents.
11. Survey of major authorised dealers' transactions in foreign exchange.	"	... Daily	From 16 banks at Bombay, Calcutta and Tamilnadu
IV. Statistics Department			
I. Survey of money rates	... "	Weekly	From 10 banks at Bombay, Calcutta and Tamilnadu

9

National Income

It is widely recognised that an arrangement of basic economic data in the form of national accounts¹ provides a useful tool for economic analysis, forecasting and economic planning. Accordingly there are three principal type of users of these national accounts statistics viz., Government personnel, academic workers, and business and other private decision makers. The first category is by far the most important user of these statistics. It includes Government economists, planners and policy makers in planning and other related offices, financial authorities, central bank and other similar authorities concerned with public economic policy and economic planning. National accounts are very helpful to them for long and short term economic planning, national budgeting, economic reporting, budget compilation and the formulation of taxation, monetary, employment, industrial, agricultural, trade and other economic policies. Similarly academic workers and business and other private decision makers do also use the national accounts statistics but to a lesser extent when compared to Government personnel. In addition to these groups of users there is within a co another important group viz., international organisations also make use of these accounts. They rely on these est in conducting studies and surveys on world and regional economic conditions and trends of developments and in formulating programmes for international economic and trade co-operation.

In view of the vast importance of the national accounts statistics to meet the requirements of both Government and

1. For a brief description, See *A System of National Accounts and Supporting Tables*, Studies in methods, Series F, No. 2, Rev. 1, United Nations, 1960.

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7. Survey of advances—security-wise.	(Form 7A & 7B)	" Fortnightly	" do-
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9. Survey of export & import bills.	" Quarterly	" do-	From banks which are Authorised dealers.
10. Survey of ownership of Central & State Government securities	" Yearly	" do-	Information obtained from all scheduled banks reporting holdings of Government securities on behalf of their constituents.
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In view of the vast importance of the national accounts statistics to meet the requirements of both Government and

1. For a brief description, See *A System of National Accounts and Supporting Tables*, Studies in methods, Series F, No. 2, Rev. 1, United Nations, 1960.

non-Government organisations, it is essential that such accounts are readily available. In order to prepare these accounts, *methodological details* of estimates of national income, savings, capital formation, consumer expenditure, etc. are required. An attempt has been made in this chapter to provide the methodological details for national income estimates and other related aggregates. So far as advanced countries are concerned, information on the growth of national income and other related aggregates are readily available. Such information is essential for assessing the economic progress of a country. Unfortunately in India such information is scanty, especially for the period prior to 1900.

The first attempt to estimate the national income of India was made by Dadabhoy Naoroji in 1876. His estimates were based on the official statistics relating to the year 1867-68. The subsequent estimates of national income for the periods prior to 1900 are listed in Table 1. A perusal of the estimates given in this table reveals that the estimates of per capita income as well as national income pertaining to various periods which are not too distant, or even for the same period differ widely. These divergences are largely due to the differences in geographical coverage, concepts and procedures employed in various studies. For example, the estimate of per capita income made by Major Baring was nearly a third higher than that of Dadabhoy Naoroji's, mainly because Baring attempted to cover services whereas Dadabhoy Naoroji left them out. Also these estimates are not strictly comparable among themselves since they are in current prices and relate to different dates. For making valid comparisons between various estimates, it is necessary that both the area covered and the method employed in preparing these estimates are identical. However, the estimates made for the periods 1900 onwards are somewhat better mainly because of the developments in the statistical methods. Table 2 sets out the various attempts made at estimating the national income from 1900 onwards.

It is evident from this table that although a number of attempts were made after 1900, it was only from 1948-49 that the regular official series of national income estimates were made available. The estimates prepared by various . . . during 1900-1948, though of somewhat better quality,

TABLE 1

Estimates of National Income in India. 1867-1900

<i>Author</i>	<i>Title or source</i>	<i>Area covered</i>	<i>Year of reference</i>	<i>National income (Rs. crores)</i>	<i>Per capita income Rs.</i>
(1)	(2)	(3)	(4)	(5)	(6)
1. Dadabhai Naoroji	Poverty and British rule in India, 1876	Br. India	1867-68	340	20
2. Atkinson, F.J.	A Statistical Review of the Income and Wealth of British India, JRSS, June, 1902	,	1875	574	30.5
3. Major Baring	Budget Speech, 1882	,	1881	525	27
4. Richard, T.	A paper read before the Institute of Bankers, London, July, 1881	,	1881	223	10
5. Horne, E.A.	An estimate of India's National Income, Bengal Economic Journal, January, 1918	,	1891	...	28
6. Atkinson, F.J.	A statistical review of the Income and Wealth of British India, JRSS, June, 1902	,	1895	877	39.5
7. Digby, W.	"Prosperous" British India, 1901	,	1898-99	428	18.9

TABLE 2
Estimates of National Income from 1900

Author	Title or source	Area covered	Year	National Income (Rs. crores)		Per capita income Rs.	
				1908-49 prices	Current prices	1948-49 prices	1948-49
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1. Curzon	Budget speech	Br. India	1901	675	30	149	
2. Giffen, R.	Economic enquiries and studies	India	1903	900	30	167	
3. Horne, E.A.	An estimate of India's National Income, Bengal Economic Journal, 1918	Br. India	1911	989	42	178	
4. Shirras, G.F.	Report on an enquiry into working class Budgets in Bombay	Br. India	1911	1920	80	339	
5. Balakrishna	Industrial Decline of India, 1917	India	1911-12	539	21	89	
6. Vakil and Muranjan	Currency and Finance in India, 1926	India	1911-14	1774	58.5	231	
7. Wadia and Joshi	The Wealth of India, 1925	Br. India	1913-14	1087	44.5	171	
8. Lupton, A.	Happy India, 1922	Br. India	1919-20	2854.5	114	217	
9. Slater, G.	The Madras Year Book, 1923	Madras	1919-20	—	—	112	213
10. Sarkar, B.N.	Proceedings of the Council of State	Br. India	1921	— over 100	208		
11. Shah, K.T.	Trade, Tariff and Transport in India, 1924	Br. India	1921-22	1470	46	96	
12. Shah and Khambatta	Wealth and Taxable capacity in India, 1924	India	1921-22	2364	74	154	

(1)	(2)	(3)	(4)	(5)	(6)	(7)
13. Tiwari, S.G.	Economic Prosperity of U.P., 1951	U.P.	1921-22	—	107	223
14. Shirras, G.F.	Poverty and Kindred Economic Problems in India, 1935	Br. India	1921-22	2866	116	242
15. Rao, V.K.R.V.	An Essay on India's National Income, 1940	Br. India	1925-29	2068	80	202
16. Shirras. G.F.	Poverty and Kindred Economic Problems in India, 1935	Br. India	1926-27	2824	115	290
17. Central Banking Committee, 1931	Enquiry	Agr. Popula- tion	1928	—	42	108
18.	Simon Commission Report, 1929	India	1929	—	116	307
19.	Quoted by Davis: Population of India & Pakistan	Br. India	1931	—	63	245
20. Rao, V.K.R.V.	The National Income of British India	India	1931-32	1689	62	241
21. Desai, R.C.	The Standard of living in India and Pakistan	India	1931-32	2809	72	280
22. Tiwari, S.G.	Economic Prosperity of U.P., 1951	U.P.	1931-32	—	50.5	196
23. Grigg, J.	Quoted by Davis: Population of India & Pakistan	Br. India	1937-38	—	56	205
24. Tiwari, S.G.	Economic Prosperity of U.P., 1951	U.P.	1938-39	—	56.1	220
25. Student	Commerce, Dec. 1943	Br. India	1938-39	1865	65	255
26. Natrajan, B.	An Essay on National Income & expenditure in India, 1949.	Union Prov,	1938-39	1482	68.5	269

(1)	(2)	(3)	(4)	(5)	(6)	(7)
27.	The Eastern Economist	—	1939-40	1924	67	231
28.	Government of India	Br. India	1942-43	3433	114	243
29.	Commerce, Dec. 1943	Br. India	1942-43	4265	142	327
30. Adarkar & Tandon,	Mimeographed: Min. of Finance	India	1944-45	5060	171	260
31. Saxena, D N.	Ph. D. Thesis, London University	Br. India	1945-46	5430	224	337
32.	Min. of Commerce	Union Province	1945-46	4931	204	307
33.	Min. of Commerce	-do-	1946-47	5580	228	314
34.	Commerce, Annual Review No. 1948	Indian Union	1947-48	4974	213	263
35.	Min. of Commerce	Union Province	1948-49	7059	277	277
36.	First Report of National Income Committee, Indian 1951.	Union Union	1948-49	8710	255	255
37.	Final Report of the National Income Committee 1954.	-do-	1948-49	8650	247	247
38.	-do-	-do-	1949-50	9010	254	249
39. Natrajan, B.	An Essay on National Income & Expenditure in India, 1949.	Union Province	-do-	5658	229	221
40.	Final Report of National Income Committee, 1954.	Indian Union	1950-51	9530	265	264
41. C.S.O.	Conventional Estimat- es of National Income (different issues)	-do-	<i>Published regu- 1951-52 larly and simi- onwards larly in white paper</i>			
42. C.S.O.	Revised Estimates of National Income	-do-	1961 onwards	-do-		

suffered broadly from the same limitations as the estimates prepared prior to 1900.

It should, however, be admitted that of the various attempts made by individuals, the study made by Dr. V.K.R.V. Rao is, perhaps, the most outstanding. His study constituted the first scientific attempt and as such it aroused the interest of the Government of India and eminent scholars in this, hitherto-neglected field of national income estimation. This culminated into the appointment of a National Income Committee by the Government of India in 1949.¹

The *First Report* of the National Income Committee was signed on 15th April, 1951 whereas the *Final Report* was signed on 14th February, 1954. Subsequent to the release of these reports, the official series of national income estimates have been regularly prepared and published by the Central Statistical Organisation in their annual publication *Estimates of National Income*. It is well-known that national income can be estimated, depending largely upon the availability of data, by three approaches viz., (i) the aggregate value of all goods and services produced by the country after deducting all material costs incurred in the process of production, or (ii) the aggregate of the earnings of all people, on account of labour and of ownership of property, from the current production of goods and services by the country's economy or (iii) the aggregate of final expenditure by all people in the form of current consumption and addition to wealth. These three methods follow the

1. An extract of the Resolution No. 15(33)-P/49 dated 4.8.1949, under which this was done, is given below :

"The Government of India have been giving consideration for some time to the inadequacy of the factual data available for the formulation of economic policies. One important gap is the absence of authoritative estimates of the national income and its various components. The Government of India have accordingly decided to set up a Committee to advise how best this gap could be filled up. The terms of reference of the Committee are to prepare a report on the National Income and related estimates, to suggest measures for improving the quality of the available data and for the collection of further essential statistics and to recommend ways and means of promoting research in the field of national income. The Committee will also guide the National Income Unit of the Government of India to complete authoritative estimates of the national income."

production, distribution and consumption approaches.

Conventional Series¹

The conventional estimates of national income are prepared by following both the product and the income approaches. The different approaches followed for different sectors of the economy have been largely governed by the availability of reliable and adequate data. For the purpose of preparing finally the conventional estimates of national income, the economy has been divided into the following sectors:

- (i) Agriculture
- (ii) Animal husbandry
- (iii) Forestry
- (iv) Mining
- (v) Factory establishments
- (vi) Fishery
- (vii) Small enterprises
- (viii) Organised banking and insurance
- (ix) Other commerce and transport
- (x) Profession and liberal arts and domestic service
- (xi) Public authorities
- (xii) House property and
- (xiii) Balance of payments and net income from abroad.

In the conventional series, the estimates of net product from agriculture animal husbandry, forestry, fishery, mining and factory establishments sectors was estimated by following the Product approach which comprises of estimating the gross value of output and deducting from it the value of various raw materials, service inputs and depreciation of assets used up in the process of production, whereas for other sectors viz., small enterprises, other commerce and transport, Profession and liberal arts and domestic services, house property, the income approach was adopted which consists of multiplying the average net earnings per person by the total estimated number of persons engaged in the respective sectors. While estimating the average net earnings per person, all factor incomes were taken into account.

1. Estimates based on methodology given in the *First* and *Final* Reports of the National Income Committee are termed as 'conventional' estimates to distinguish these from the 'revised' estimates released recently by the C.S.O.

The estimates of national income in respect of banking and insurance sector, Public authorities etc., the estimates were based on the analysis of the budget documents of the Central and State Governments, Profit and Loss Accounts of the Insurance Companies etc.

Revised Series

The conventional estimates of national income at constant (1948-49) prices, prepared and published by the Central Statistical Organisation till 1966, were generally based on the same concepts, statistical material and methodology as described in the *First and Final Reports* of the National Income Committee. The *Final Report* also provided a number of recommendations for improving and collection of fresh data necessary for further improving the national income estimates. In view of the growing importance of the national income estimates, particularly for purposes of planning, several methodological studies were undertaken in the National Income Unit. In 1961, it brought out a study entitled "*National Income Statistics—Proposals for a revised series of National Income Estimates for 1955-56 to 1959-60*"¹. The C.S.O., after taking into account the comments and suggestions of various scholars and agencies engaged in this field and a number of additional independent studies based on the latest available data with the government and non-government agencies helped in bringing out in 1967 another official publication "*Brochure on Revised Series of National Product for 1960-61 to 1964-65*"². This publication describes briefly the revised methodology as well as the conventional methodology along with the estimates for different industries of the economy. The detailed volume which promises to provide detailed methodology, different sources of data and suggestions for further improvement etc., is also expected to be published soon.

As in the case of conventional series, the revised estimates

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1. The *Proposals* contains a comparison of sectorwise rates of change as measured by the conventional series and the revised series as presented in this publication.
 2. In the *Brochure*, use has been made of the expression 'national product', in the place of 'national income' which means one and the same thing at the aggregate level.

of national product in respect of the following heads have been prepared along with the estimation of working force from individual industries of the economy.¹

1. Agriculture
2. Forestry and logging
3. Fishing
4. Mining and quarrying
5. Large-scale manufacturing
6. Small-scale manufacturing
7. Construction
8. Electricity, gas and water supply
9. Transport and Communication
10. Trade, Storage, Hotels and Restaurants
11. Banking and Insurance
12. Real estate and Ownership of dwellings
13. Public Administration and Defence
14. Other Services
15. External transaction

The revised series of national product are prepared both at current and at 1960-61 prices. In preparing these estimates, a large number of revisions have been made in various sectors of the economy. These revisions are largely the results of the availability of fresh data from different Government and non-Government agencies. Here also, as in the case of conventional series, the Product approach has been employed in the commodity-producing sectors viz., agriculture, forestry and logging, fishing, mining and quarrying, large-scale manufacturing; whereas for other sectors like Small-Scale manufacturing, electricity, gas and water supply, transport and communication, trade, storage, hotels and restaurants, real estate and ownership of dwelling, the income approach has been employed. For construction industry, estimates have been prepared by following both the commodity-flow and the expenditure methods. For other sectors, the estimates are based on the detailed analysis of Central and State Government budgets in the case of Public Administration and defence and on the basis of analysis of Profit and Loss Accounts of the Banks.

1. Appendix I to this chapter contains the activities included under the various industry groups in the revised series.

and Insurance Companies for Banking and Insurance sector. Estimates of 'External Transactions' are based on the data supplied by the Reserve Bank of India. We now discuss briefly the improvements effected in the revised series over the conventional series.¹

The improvements effected in the revised series relate to certain modifications in the industrial classification for the measurement and presentation of national product estimates, use of the 1961 population census data, presentation of separate estimates, as far as possible, in respect of organised and un-organised sectors of the economy and estimation of national product in each sector.

"The main improvements in the revised industry-wise estimates, however, relate to (a) the broad sector-agriculture where the all-India estimates are obtained by aggregating the state-wise estimates which are based on the fully revised estimates of out-turn of agricultural commodities, revised yield rates of minor crops, livestock products and agricultural by-products, wider empirical base for data on prices and use of latest data on cost deductions ; (b) large-scale manufacturing, where the detailed data thrown up by the Annual Survey of Industries together with the revised index of Industrial Production with 1960 as the base have been used ; (c) un-organised sectors like small scale manufacturing, transport other than railways, trade, hotels and restaurants and other services, wherein the working force estimates have been obtained from the current national sample survey data supplemented by the results of other available surveys and studies and the 1961 census of population ; (d) Construction where expenditure and commodity-flow approaches instead of income approach have been adopted ; (e) real estate and ownership of dwellings, where the estimates have been prepared on the basis of number of residential houses reported in 1961 census of population; and (f) Public administration and defence, where the scope of the industry has been narrowed to the extent practicable with a view to exclude all Government activities other than administrative and regulatory activities. The base year for compiling the

1. For details of improvements effected in the revised series, the reader should refer to Appendix II to this chapter.

constant price estimates in the revised series is 1960-61 in place of 1948-49 adopted for conventional series. This is done especially because 1960-61 is the more recent bench-mark year for which maximum data are available."¹

Regional Income Studies

Regional or state income can be defined either as the income originating within the boundaries of the state or as the income received by the normal residents of the state i.e., income accruing to the residents of the state. The former corresponds to 'domestic product' concept for the country as a whole and the latter to 'national income' concept. For a comparative study of the level of industrial and economic development among the states, it is essential to have an estimate of income originating within each state. In India because of the inherent conceptual difficulties and the lack of relevant statistics no attempt has so far been made either by the State Statistical Bureaus (S.S.B.) or by the Central Statistical Organisation to prepare estimates on *income accruing* within the states. All available statistics on the subject are, therefore, based on the concept of 'domestic product'. For purposes of satisfactory analysis of regional issues, e.g., balanced development and allocation of resources and for formulation of national policies aimed at regional development, it is very essential to have estimates of regional income by both the approaches mentioned above.

In view of the growing importance of statewise estimates of domestic product for purposes of regional planning, the S.S.B.'s have been regularly preparing and publishing such estimates for their states utilising all the possible published and unpublished material for their respective states. For commodity producing sectors, the estimates are prepared by the S.S.B.'s according to the standard methodology laid down by the Central Statistical Organisation. It is only in the case of non-commodity-producing sectors that numerous difficulties arise. Attempts are being made by individual S.S.B.'s to prepare as far as possible estimates of state domestic product so that these become comparable with

1. The deflators/indicators used for arriving at national product at constant prices in the conventional and revised series are contained in Appendix III to this chapter.

the All India estimates of national income.

It is hoped that, as in the case of commodity producing sectors, estimates are prepared by the S.S.B's on the standard methodologies evolved by the C.S.O. for the non-commodity producing sectors also so that the domestic products of the states become comparable with the all India estimates. Steps have been taken by the C.S.O. and standard methodologies have been evolved for preparing estimates of the state income relating to (i) Electricity, Gas and Water Supply (ii) Public administration, local authorities, (iii) Other Services (Education), other services (medical and health and other services (Sanitary). In the case of Small-scale manufacturing, Construction, Transport by other means, Trade, Storage, hotels and restaurants, Real estate and ownership of dwelling, other services (others), standard methodologies are yet to be prepared. For railways, communications, banking and insurance, public administration (Central), the C.S.O. has to prepare estimates with more or less firm database as available at the centre and in the States.

In the case of preparation of all India estimates, there are still many sectors where very little data are available and in order to improve further the revised estimates, constant efforts are being made at the Central Statistical Organisation to fill up these gaps either through N.S.S. or other agencies like the R.B.I. Similar efforts should be made by individual S.S.B's to assess the shortcomings of the data available at state level and the ways and means of filling such gaps to improve the estimates at state level. Here mention may be made of some of the very important gaps which still exist and which need to be filled up through surveys or type studies etc. In the case of agriculture industry, e.g., data on (i) yield rates of by-products such as straw and stalks, rice husk, sugar cane thrash etc., (ii) data on the production and prices of minor crops and by-products are very scanty and inadequate to meet the requirements of the national income at the all India level. Similarly, yield rates of milk per animal, utilisation and conversion rates of milk into various products, slaughter statistics from authorised slaughter houses on a regular basis, animal feed cost and other costs, marketable surplus of animal husbandry products, prices of animal husbandry products are some of the gaps in the case of 'animal husbandry industry'. As regards Forestry, data on minor forest

produce, trade and transport margins, input/cost of production, prices on a regular basis for major and minor forest produce are lacking. For Fishing, annual catch of inland fish, cost of production separately for inland and subsistence fishing, trade and transport margins, collection of prices for inland and marine fish etc., are some of the weak points of the sectors. So far as Mining, Quarrying, Factory establishment sectors are concerned, quite a lot of published material is available. It is in the case of small enterprises where not much data are available. For this industry, it is essential to have data on inputs, outputs and employment separately for household and non-household parts. Similar data on inputs, outputs and employment are essential for construction industry. In the case of other commerce and transport, data on employment, earnings, trade margins need to be further improved. For services, data on earnings and employment on regular basis are essential. These are in brief some of the gaps and shortcomings of the different sectors which need to be filled up to further improve the revised estimates of national income. With the improvement in the national income estimates, the statewise estimates of domestic product may also improve and serve the purpose of the planners and administrators.

Saving and Capital Formation

The absence of any estimates of Capital formation and saving of reasonable reliability constitutes a major gap in the national accounts statistics. In this section, we review the various attempts made so far to estimate saving and capital formation in India.

Saving

Apart from being an important constituent of the system of national accounts, saving by itself has an important role to play in the economic development of the country.

In India, so far no official estimates of saving are available. Recently, besides the researches of individuals,¹ some pioneering

1. (i) Avadhani, K.R., and others : *Saving in the Indian Union, 1949-50 to 1954-55*, Papers on National Income and Allied Topics Vol. I, Indian Conference on Research in National Income, 1960.
- (ii) Bhatt, V.V. : *Savings and Capital Formation, Economic Development and a Cultural Change*, April, 1959, Chicago (U.S.A.).

attempts have been made by the Reserve Bank of India, the National Council of Applied Economic Research (NCAER) and the Central Statistical Organisation to prepare such estimates.

The Reserve Bank published their first estimates of saving in the *Reserve Bank of India Bulletin*, March 1960. These estimates were subsequently revised in the light of fresh data. These revised estimates were published along with the investment estimates in Reserve Bank's *Bulletin*, August 1961. The latest estimates of the Reserve Bank are for the period 1950-51 to 1962-63, and these are published in the Bank's *Bulletin*, March 1965. These estimates are primarily based on data taken from balance-sheets, and profit and loss accounts for the organised sectors while for the activities of the household, the saving has been measured in terms of the additions to their financial and non-financial assets. Subsequently, the Reserve Bank has also published in the *The Report on Currency and Finance*, 1966-67, the estimates of saving of government and domestic sectors and in the case of households the estimates relating to financial assets. These cover the period 1950-51 to 1964-65.

The NCAER also undertook in 1958 a study of aggregate saving, providing detailed estimates of saving and investment for the various sectors of the Indian economy on the basis of information available from a number of sources. The estimates of saving and investment which were published in 1961 in the NCAER'S monograph, *Saving in India*, related to the period 1948-49 to 1957-58. Subsequently, the Council conducted two Surveys—All India urban and Rural Household Saving Surveys—the results of these two surveys and other available data were used to estimate the level of domestic saving in India.² The latest estimates in the series cover the period 1950-51 to 1964-65.³

The Central Statistical organisation has also attempted to estimate saving⁴ in India. The estimates are available in

1. NCAER, *Urban Income and Saving*, 1962 and *All India Rural Household Saving Survey*, Volumes I and II.
2. NCAR, *Saving in India, 1950-51 to 1951-62*, July, 1965.
3. NCAER, *Saving in India during the Plan Periods*, monograph 16, June 1966.
4. Here it would be useful to give the definition of domestic and national savings as laid down in the U.N. System of National Accounts. Domestic Saving, thus comprises the aggregate saving of all the

CSO'S mimeographed monograph *Financing of Gross Capital Formation in India for 1948-49 to 1959-60*.¹ The Saving estimates are prepared for public, private corporate and private non-corporate sectors, separately.

Saving estimates of public sector, comprising of government administration, both departmental and non-departmental, are prepared primarily from an analysis of income and expenditure accounts and balance sheets of individual units. The saving estimates of private corporate sector, comprising of non-government non-financial companies, commercial banks and other financial institutions and cooperative banks and societies, are prepared separately for public and private limited companies and banks, and cooperative societies. The estimates for the former are prepared from the income and expenditure accounts as the retained profits of companies, while the estimates for the latter, namely, cooperative societies are prepared from the details of changes in reserves obtained from their annual accounts. The CSO has obtained the saving of the private non-corporate sector as a residual after deducting the saving of the government and corporate sectors.

The estimates of gross domestic saving given in CSO'S publication were obtained by subtracting from gross capital formation, the net capital inflow from abroad.

A Serious gap in the field of saving is the non-existence of suitable deflators/indicators to prepare saving estimates at constant prices. It is hoped that the concerned agencies engaged in this field would pay due attention to devising such deflators/indicators.

Capital Formation

Capital formation constitutes another important item of national accounts. In India, the CSO,² besides individual re-

economic units within the geographical boundaries of the country irrespective of whether they are Indian or Foreign. National saving is domestic saving *Plus* saving of Indian nationals/establishments abroad *minus* saving of foreign nationals/establishments in India.

1. See also *Estimates of Gross Capital Formation in India for 1948-49 to 1960-61*, CSO, 1961.

2. CSO, *Estimates of Gross Capital Formation in India for 1948-49 to 1960-61*.

searchers,¹ have recently made some attempts to prepare the estimates of capital formation. In the following paragraphs, the procedure followed by CSO to arrive at these estimates is outlined.

The CSO has prepared estimates of gross capital formation in respect of both fixed capital formation and change in stocks for the Indian economy. Separate estimates of capital formation have also been made for the public and private sectors for the two types of capital goods, namely, 'Construction' and 'machinery and other equipment'. Estimates of capital formation and change in stocks by types of purchasers are also available. We now describe the procedure and the source material used in arriving at the estimates of capital formation in (i) construction² (including construction of residential houses), (ii) machinery and equipment (excluding durable goods in the hands of households and war equipment), and (iii) changes in stocks (exclusive of change in stocks of war materials).

(i) Construction :

Construction for the purpose of estimating capital formation is taken to cover not only the construction activity carried out by special trade contractors such as carpenters, plumbers, plasterers and electricians, but also all own-account construction work taken as an ancillary activity by the staff and for the use of an enterprise.

The estimates of capital formation in construction are prepared by following both (i) the production or commodity flow approach which envisages a regular flow of data on the production of various types of construction materials, their imports, exports and stocks, their wholesale and retail prices as well as trade and transport charges that might be attributable to them at the site of construction and (ii) the expenditure approach which involves preparing estimates of the money spent on various types of construction projects undertaken during the reference period by different economic units.

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1. For example, (i) Tiwari S.G., and others, *Estimates of Capital Formation in India* and (ii) Lal, R.N., and others, *Growth of Construction Industry in India, 1950-51 to 1964-65*, Papers submitted at the 4th and 6th Indian Conferences on Research in National Income, respectively.
 2. Capital formation in construction excludes expenditure on current repairs and maintenance and construction expenditure of defence establishments.

The commodity-flow approach covers cement, iron and steel products, permanent fixtures and fittings and other building materials. In estimating the availability of these materials account is taken of their domestic production in factory establishments as well as in small-scale enterprises. Information has been drawn from a number of sources. Domestic production and stocks in the factory establishments have been compiled mainly from *Annual Survey of Industries* (ASI), *Monthly Statistics of Production of Selected Industries*, annual reports of the Directorate General of Technical Development (DGTD). Data on imports, exports, re-exports and import duties have been compiled from *Monthly Statistics of Foreign Trade of India* and *Customs and Excise Revenue Statements of the Indian Union* (DGCI&S). Contribution of small enterprises to the inputs in construction has been worked out on the basis of the estimates of value added in the groups 'metal manufacturing and engineering' and 'wood, glass, stone and ceramics'.

The estimates of construction unaccounted in the commodity flow approach have been prepared in respect of construction and repairs and maintenance of residential and non-residential housing and other construction work. The principal sources for deriving these estimates are the *All India Rural Debt and Investment Survey, 1961-62* (RBI), the *All India Rural Household Savings Survey* (NCAER), National Sample Survey Reports,¹ balance sheets of public and private companies and *Statistical Tables relating to Banks in India* (RBI).

To obtain the estimates of capital formation in construction, the estimates of repairs and maintenance and the total estimates of construction for defence are deducted from the total estimates of construction consisting of estimates covered by the commodity flow approach and the estimates not covered by the commodity flow approach.

Construction industry accounts for major part of the fixed capital formation in the economy. Table 3 gives an idea of capital formation in construction in relation to total capital formation in the economy. It should be mentioned here that

1. Especially, the NSS Report No. 97, *Tables with Notes on Capital Formation, 15th Round (Rural)*, and the NSS Draft Report No. 133, *Tables with Notes on Capital Formation, 17th Round (Urban)*.

the comparisons are only approximate since there are wide-methodological differences in the compilation of two estimates, namely, net capital formation estimates prepared by the RBI and the estimates of capital formation in construction taken from Lal's Paper.¹

TABLE 3
Proportion of net capital Formation in Construction
To Total net Domestic Capital Formation

Years	<i>(at current prices)</i>	<i>(Rs. crores)</i>	
(1)	(2)	(3)	(4)
1950-51	534	360	67.4
1951-52	754	288	38.2
1952-53	391	277	70.7
1953-54	562	301	53.5
1954-55	811	357	44.1
1955-56	1034	463	44.8
1956-57	1454	635	43.6
1957-58	1287	536	41.6
1958-59	1331	558	41.9
1959-60	1360	666	49.0
1960-61	1869	912	48.8
** 1961-62	1788	1029	57.6
*** 1962-63	2053	1099	53.5

* RBI estimates of investment published in *RBI Bulletin*, March, 1965.

** Estimates of net domestic capital formation are adjusted on the basis of estimates of saving in the financial assets of the house-hold sector given in the Report on Currency and Finance, 1966-67.

***Lal and others : *Growth of Construction Industry in India, 1950-51 to 1964-65*.

(ii) Machinery and equipment :

Although estimates of capital formation in machinery and equipment may be prepared either by commodity flow or by expenditure approaches, these in India estimates have been prepared on the basis of commodity-flow approach.

1. Lal R.N. and others, *Growth of Construction Industry in India, 1950-51 to 1964-65*, a paper submitted to the Sixth Indian Conference on Research in National Income, 1968.

The main sources of data for preparing estimates of capital formation in machinery and equipment are the *Annual Surveys of Industries* (Census and sample sectors) reports, *Monthly Statistics of the Foreign Trade of India*, *Customs and Excise Revenue Statements of the Indian Union*, Annual Reports of the Railway Board, and relevant National Sample Survey Reports.¹

The procedure employed in estimating capital formation in "machinery and equipment" is as follows. The value of domestic production of machinery and other equipment both in factory establishments and small enterprises sectors are estimated at ex-factory prices, to which are added the amount of excise duties, c.i.f. value of export duties; and the value of re-exports are deducted from it. The total value so obtained is marked up for the trade, transport and other charges (which include expenditure on brokerage, installation, engineering, architects, legal and other services, and indirect taxes other than excise duties and import duties) and, thereafter the value of exports is deducted to arrive at the estimates of the available supply of various items. As all the items considered for estimating capital formation are not wholly capital in character, these are classified into (i) capital goods, (ii) parts of capital goods, and (iii) partly capital goods.² As the total value of the latter two categories cannot be taken wholly as capital goods, only a certain proportion of these enter into the estimates of gross domestic capital formation.

(iii) Changes in Stocks :

Estimates of changes in stocks are prepared in respect of (i) foodgrains, (ii) livestock, (iii) mining, (iv) commerce, (v) agricultural commodities, (vi) manufacturing (vii) electricity, and (viii) public administration.

For preparing the estimates of changes in stocks, data on stocks of raw materials, work in progress and finished products held by producers and traders both in the public and private sectors, are needed both in physical and value terms.

1. Especially the N S S. Report No. 105, *Tables with Notes on Household non-mechanised Transport and utilisation of working animals*, (July 1959 to June 1960).

2. Another category may be 'parts of partly capital goods'.

The principal sources of data for preparing these estimates are the *Trend and Progress of Banking in India* (RBI), the *Quinquennial Livestock Censuses*, various publications brought out by the Indian Bureau of Mines, Reports of the *Annual Survey of Industries*, *Monthly Statistics of the Production of Selected Industries in India*, annual accounts of the State Electricity Boards, private electricity companies and municipal undertakings, National Sample Survey Reports, *Bulletin of Food Statistics*, etc.

It should be pointed out here that adequate data are not available in respect of the stocks held either in small enterprises sector or by traders. Further, data on stocks of various commodities in the non-government and non-corporate sector are also very scanty.

Estimates of Gross and net Capital Formation :

In order to arrive at the estimates of gross capital formation, the estimates of gross fixed capital formation in 'construction' and 'machinery and other equipment' are added to the estimates of change in stocks.

The estimates of net formation¹ may be derived from the estimates of gross capital formation after allowance is made for depreciation, obsolescence and accidental damage to fixed capital.

The estimates of allowance for depreciation provided by the departmental commercial undertakings can be culled out from the accounts contained in the budgets and in the case of the corporate sector, from the annual accounts of the companies. For non-corporate non-government sector, the available information being very scanty, statistics need to be collected along with data on capital formation. The estimates of gross capital formation at constant prices have also been prepared by using suitable deflators indicators.

Estimates of capital formation to be meaningful for policy purposes should be available by industrial use. However, the present availability of statistical information is very inadequate to permit a satisfactory estimation of capital formation in

1. Conceptually, net capital formation represents the addition to fixed capital (buildings, other construction and works, equipment and machinery) and working capital (producer's stocks) available for further production. (*Concepts and Definitions of Capital Formation Studies in Methods*, Series F, No. 3, Statistical Office, United Nations).

construction by industries.

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APPENDIX I

ACTIVITIES COVERED UNDER THE VARIOUS INDUSTRY GROUPS IN THE REVISED SERIES

I Agriculture.

The activities included under this industry group are (i) growing of field crops, fruits, nuts, seeds and vegetables, (ii) tea, coffee and rubber plantations, (iii) growing of trees on farm yards and village common lands, (iv) agricultural and horticultural services on a fee or contract basis such as harvesting, baling and threshing, husking and shelling, preparation of tobacco for marketing, pest destroying and spraying, pruning, picking, packing and operating irrigation systems including those operated by government, (v) rental income from farm buildings and farm machinery and interest on agricultural debt, (vi) breeding and rearing of animals and poultry including private veterinary services, (vii) production of milk and milk products, (viii) slaughtering, preparation and dressing of meat, (ix) production of raw hides and skins, eggs, raw wool, honey and silk worm cocoons, and (x) hunting and trapping.

II Forestry and Logging.

The activities in forestry and logging include (a) forestry (planting, replanting and conservation of forests, gathering of uncultivated materials, charcoal burning carried out in the forests etc.), and (b) logging (felling and rough cutting of trees, hewing or rough shaping of poles, blocks etc., and transportation of logs up to the permanent lines of transport).

III Fishing.

The activities included in this industry relate to commercial and subsistence fishing in (i) ocean, coastal and off-shore waters and gathering of sea weeds, sea shells, pearls, sponges and other ocean and coastal water products, (ii) inland water fishing which include catching, taking and gathering of fish from rivers, irrigation and other canals, lakes tanks, inundated tracts, etc. and exploitation of uncultivated plant life in inland

waters and artificial ponds and (iii) fish curing, e.g., salting and sundrying of fish.

IV Mining and Quarrying.

The activities covered under this industry comprise 'extraction of minerals which occur in nature as either solids, liquids, or gases; underground and surface mines, quarries and oil wells, with all supplemental operations for dressing and beneficiating ores and crude minerals such as breaking, milling, washing, cleaning, grading, etc.' All these activities are covered to the extent they are carried at the mine site. Production of salt obtained by evaporation process has not been included in this industry. Large expenditures on prospecting and boring activities are also excluded from this industry and covered under 'construction' industry.

V Large-scale Manufacturing.

Large-scale manufacturing sector covers all manufacturing and processing establishments (called factories) which are registered under the Indian Factories Act, 1948. Establishments registered under the Factories Act but not engaged in manufacturing activity, such as those providing water and sanitary services, recreation services, personal services, and generation, transmission and distribution of electricity are excluded from the scope of this sector. Similarly operation of cold storages, which, though classified under 'manufacturing' in the Annual Survey of Industries (ASI) has not been covered here but in 'trade, storage, hotels and restaurants' industry. Railway workshops, mints and other manufacturing establishments are considered to form part of the large-scale manufacturing sector.

VI Small-scale Manufacturing.

Small-scale manufacturing covers all manufacturing and processing activities, including repair and maintenance services undertaken by households and non-household small-scale manufacturing units which are not registered under the Indian Factories Act, 1948. However, hand-pounding of rice, conversion of sugarcane into *gur*, slaughtering of animals for meat and preparation of milk products (e.g., *ghee*, *dahi*, etc. except *khoa*, ice-cream and *chana*) are treated as ancillary activities in

the 'agriculture' industry.

VII Construction.

The activities in this industry cover construction, repair and demolition of buildings, highways, streets and culverts; heavy construction of such projects as sewers and water mains, railway road beds, rail-roads, piers, tunnels, subways, elevated highways, bridges, viaducts, dams, drainage projects, sanitation projects, aqueducts, irrigation and flood control projects, hydroelectric plants, water power projects, gas mains, pipelines and all other types of heavy construction, marine construction such as dredging under-water-rock removal, pile driving, land draining and reclamation, construction of harbours and waterways, water wells, airports, athletic fields, golf courses, swimming pools, tennis courts, parking areas, communication systems such as telephone and telegraph lines and all other construction, whether undertaken by private bodies or governmental authorities. It also includes construction, repair and demolition work undertaken as an ancillary activity by the staff and for the use of an enterprise classified in any other industry. Thus the scope of this industry covers all own-account construction activity in addition to the construction activity carried out by special trade contractors such as carpenters, plumbers, plasterers and electricians. Further, prospecting and boring activity is included in construction whereas removal of overburden by manual and machine methods is included in the mining and quarrying industry.

VIII Electricity, Gas and Water Supply.

The activities covered in this industry group include (i) generation, transmission and distribution of electric energy, (ii) manufacture of gas in gas works and the distribution of manufactured or natural gas to domestic and industrial consumers, and (iii) collection, purification and distribution of water to domestic and industrial consumers excluding the operation of irrigation systems.

IX Transport and Communication.

The activities in this industry group are (i) transport by railways, (ii) communication services rendered by the Posts and

Telegraphs Department (P & T) and the Overseas Communication Service (OCS), and (iii) transport by other means, viz., mechanised and non-mechanised road transport, organised and unorganised water transport, air transport and services incidental to transport. Railway workshops and railway manufacturing establishments like Chittaranjan Locomotive Works, Integral Coach Factory etc., are, however, excluded from railways. Further, the activities of the P & T, relating to post office savings bank, cumulative time deposit accounts, national savings certificates and life insurance are also excluded from the communication industry. These activities are included in the large-scale manufacturing sector, and banking and insurance industry group respectively.

X Trade, Storage, Hotels and Restaurants.

The activities covered by this industry group are (i) wholesale and retail trading including importing and exporting of goods and commodities, auctioneering, hiring out of durable goods and other allied activities, (ii) operation of storage facilities e.g., warehouses (including bonded warehouses), cold storage, furniture repositories and safe deposits, when such storage is offered as an independent service, and (iii) services rendered by hotels, boarding houses, eating houses, cafes, restaurants etc.

XI Banking and Insurance.

This industry group includes banks, banking department of the RBI, insurance carriers of all kinds and other financial institutions such as stock exchanges, loan, investment, hire purchase, chit-fund and other non-banking financial companies, industrial development and financial corporations, activities of the P&T Department relating to the post office savings bank, cumulative time deposit accounts, national savings certificates and life insurance, and co-operative credit societies (such as primary agricultural and non-agricultural credit societies, grain banks, primary land mortgage banks, Central land mortgage banks, supervisory unions, Central credit societies, industrial co-operative banks, and State co-operative banks).

XII Real Estate and Ownership of Dwellings.

The net product from real estate and ownership of dwellings consists of the net rental income accruing from ownership

of dwellings and the net product from activities of all types of dealers such as operators, developers and agents connected with real estate. The net rental income from buildings other than dwellings has been included in the net product from various industry groups which use these fixed assets.

XIII Public Administration and Defence.

The services included in public administration and defence are those rendered by the administrative departments of Central Government, State Governments, municipal corporations, improvement trusts, municipalities, *zila parishads*/district and local boards and village *panchayats*. Expenditure on administration of various funds (e.g., Central road fund, famine relief fund etc.) and the activities of the issue department of the RBI are also included. However, construction activity undertaken by government is covered under the industry 'construction', whereas 'education' and 'medical and health services' are included in the industry group 'other services'. The departmental commercial enterprises of government such as railways, communication, forests, road transport, electricity, irrigation industries etc., as also the defence manufacturing establishments, government printing presses and port trusts are included in the appropriate industry groups.

XIV Other services.

The range of activities covered in this industry group includes (i) education and research services, (ii) medical and health services, (iii) religious and other community services, (iv) legal services, (v) business services, (vi) recreation and entertainment services (vii) personal services comprising domestic services, laundry, cleaning and dyeing, barbers and beauty shops and other personal services, (viii) sanitary services (comprising garbage and sewage disposal including the operation of drainage systems), and (ix) services/activities not elsewhere classified.

XV External Transactions.

The net factor income from abroad constitutes (i) net compensation of employees, and (ii) net property and entrepreneurial income (i.e., interest, dividends and profits) from the rest of the world.

APPENDIX II

IMPROVEMENTS INTRODUCED IN THE REVISED SERIES

I Working Force.

In the revised series major improvements have been possible due to the adoption of the revised industrial classification and the incorporation of latest available data. According to the revised industrial classification the erstwhile sector 'other commerce and transport' has now been split up into (i) 'trade, storage and hotels and restaurants' and (ii) 'transport other than railways' under the broader category 'transport and communication'. Similarly, the former two industries 'professions and liberal arts' and 'domestic service' have been combined into the broad industry group 'other services'. The previous 'organised banking and insurance' industry which now includes indigenous money lending also, is termed as 'banking and insurance'. The scope of the former industry 'house property' has been extended to cover 'real estate' (previously included in 'other commerce and transport') and is accordingly called as 'real estate and ownership of dwellings'. The projections of working force estimates for years other than 1960-61 have been made in respect of 'other services' industry only. These projections have been made partly on the basis of trends revealed by current available data (e.g., for educational and medical services) and partly by using the 1951 and 1961 census economic data in preference to the use of similar data thrown up by the 1941 and 1951 censuses.

II Agriculture.

The improvements effected in preparing the revised estimates from agriculture are in a number of directions such as (i) adoption of fully revised output figures of agricultural commodities instead of partially revised figures, (ii) revision of the yield rates of various by-products and also of value of yield per hectare of certain unspecified minor crops where no data existed on physical yield rates, (iii) revision in the yield rates of milk, wool, eggs and dung, (iv) considerable widening of the empirical coverage of data on wholesale prices used for evaluation

purposes, (v) revision of the method of averaging the wholesale prices and adoption of peak marketing period in preference to the harvest period of a crop for purposes of averaging over time, (vi) inclusion of inputs, which have assumed importance such as electricity, diesel oil, pesticides etc., (vii) building up the aggregates by working out most of the details at State level, and (viii) inclusion of the operation of government irrigation systems.

III Forestry and Logging.

The major improvements made in the revised estimates from this sector relate to (i) making an adjustment for non/under reporting of major and minor forest products and (ii) extension in the empirical coverage of price data as against the scanty data on prices culled out from the reports of Census of Indian Manufactures in the case of conventional estimates. The net product from new plantations is also included in the revised estimates.

IV Fishing.

The important improvements effected in the revised series presented here are (i) use of the current estimates of catch of inland fish from the State Fishery Departments (SFD.) (ii) extension in empirical coverage of prices, (iii) revision in the basis of estimation of value added in fish curing on the basis of latest data on utilization of fish for salt curing and sundrying obtained from the SFDs, and (iv) revision in estimates of inputs on the basis of detailed data on costs of production of marine fish available from the major maritime States.

V Mining and Quarrying.

The improvements effected in the revised series relate to certain methodological changes, shift in reference period from the calendar to the financial year and building up of the revised estimates from below *i.e.*, the national totals are arrived at by aggregating the Statewise estimates.

VI Large-scale Manufacturing.

The improvements include (i) use of Annual Survey of Industries data instead of projection of the gross value of output of 1953 with the help of indices of production and prices and superimposition thereon of the input-output relationships

as obtaining in 1953, and (ii) compilation of estimates for financial year instead of calendar year.

VII Small-scale Manufacturing.

In the revised series a number of improvements have been made. The benchmark estimates of the revised series have been worked out in greater detail on the basis of 1961 census economic data on working force providing better estimates for all the broad industry groups separately for rural and urban household and non-household subsectors. The conventional method, on the other hand, depended exclusively on the 1941 and 1951 census data on working force and projection thereof to subsequent years for the manufacturing industries as a whole. The estimates of gross product per worker for the benchmark year are, perhaps, more reliable since they are based on an all-India survey. Further the benchmark estimates have been carried forward to other years with the help of indicators of physical output or input.

VIII Construction.

The main improvement relates to the estimation of gross product from the estimates of expenditure on repairs, renewals, replacements and new construction. Also in place of the income approach, the estimates have been prepared by following both the commodity flow and expenditure approaches. The scope of construction activity has been enlarged by including own-account construction also.

IX Electricity, Gas and Water Supply.

The major improvements relate to the use of accounts of individual electricity undertakings and the comprehensive statistics published by the Central Water and Power Commission. In the case of the gas industry, the estimates of employment are based on the results of the 1961 Census. For water supply industry the estimates have been compiled separately for rural and urban areas and the latter are based on current available data on employment and compensation of employees obtained directly from various municipal corporations and municipalities.

X Transport and Communication.

In case of railways, the main improvements effected relate

to exclusion of (i) railways manufacturing establishments and (ii) construction activity in respect of transport by railways. Similarly in the case of communication the revision in the scope of the sub-sector relates to the exclusion of (i) banking and insurance activities and (ii) all construction activity undertaken by the Posts and Telegraphs Department. Another improvement relates to the adoption of 'actual expenditure on renewals and replacement of assets', in preference to the amount of contribution to renewals reserve fund for the estimates of allowance for depreciation. In the case of 'transport by other means' the estimates in the revised series have been compiled from the budget documents, accounts of non-departmental undertakings, port trusts and shipping companies. In mechanised private road transport the indicators relate to the number of various types of motor vehicles. The conventional estimates, however, were based on the growth rate of working force during the years 1941 and 1951. Further, estimates of average earnings per worker have not been adjusted on the basis of the index numbers of money earnings of factory employees as in the conventional estimates.

XI Trade, Storage, Hotels and Restaurants.

The major improvements effected in the revised series relate to certain changes in the scope of the industry group and in the method of estimation as well as incorporation of latest available data on the subject. The scope of the industry group has been redefined so as to exclude all transport activities as well as indigenous money lending. Further, in the revised series, the estimates have been prepared separately for the organised and the un-organised parts of each of the three industry sub-groups viz., 'trade', 'hotels and restaurants' and 'storage'. For the conventional series, estimates of net output at current prices were prepared for all the years following income approach making use of the estimates of working force based on the extrapolation of 1941 and 1951 population census figures of working force. Similar procedure could not be adopted for the revised series due to unsatisfactory trends¹ of the number of

1. In fact, the number of workers under 'trade' in 1961 remained more or less stagnant at the 1951 level. In some States the total number of

Investment Survey for cost of repairs of rural dwellings, and (v) classification of taxes on dwellings as direct tax.

XIV Public Administration and Defence.

The improvements relate to the narrowing down of the scope of public administration and defence by excluding governmental activities other than regulatory and administrative to the extent possible and the inclusion of the issue department of the RBI.

XV Other Services.

In the revised series the annual estimates of working force have been prepared on the basis of 1951 and 1961 population census economic data in place of similar data for 1941 and 1951 censuses. The estimates of earnings per worker, in the case of the conventional series, rested on observations culled out from scattered source material of doubtful validity. Such observations related mostly to years earlier than the base year. For the revised series, the estimates are based on actual observations collected through a sample enquiry relating to the year 1963-64. In the conventional series, workers under the sub-group 'services' / activities not elsewhere classified' were reallocated to other sub-groups on a *pro-rata* basis. In the revised series, they are shown as a separate group for lack of empirical basis for reclassifying them into other distinctly classified groups. In the revised series, the earnings of secondary workers have also been taken into account in estimating the total gross/net product from 'other services' industry group. In the case of education, medical and health, legal and sanitary services, the estimates relate to the entire activity, rather than the part undertaken by the private-sector only as was the case with the conventional series.

XVI External Transactions.

The improvements relate to the inclusion of estimates of foreign companies and foreign controlled rupee companies and other factor services in the revised estimates.

workers over the decade 1951-61. The estimates of earnings per worker, in the case of the 'conventional' series, were prepared from scattered source material relating to different time periods which lacked in uniformity of concepts and methods of collection. The revised estimates of net product per worker in respect of 'trade and hotels and restaurants' are based on data collected by the NSS through a broad-based sample enquiry relating to a more recent period viz., 1958-59. It is, however, admitted that even these estimates are not very satisfactory owing to certain limitations of the NSS sample size etc. For the revised series, earnings of workers following trade etc. as secondary activity have been estimated separately and taken into account to estimate the net product from this sector. Further the estimates for activities of organised character have been prepared separately with the help of currently available data thus limiting the errors of estimation more to the un-organised activities.

XII Banking and Insurance.

The important improvements relate to (i) use of RBI studies on non-banking financial companies and accounts of industrial development and financial corporations, (ii) inclusion of un-organised non-banking financial enterprises, (iii) extension of coverage of co-operative credit societies, (iv) use of additional data for life and non-life insurance sectors, and (v) inclusion of banking and insurance activities of the Posts and Telegraphs Department.

XIII Real Estate and Ownership of Dwellings.

The main improvements made in the revised series are (i) the use of 1961 population census data on number of census houses, (ii) extension of the empirical coverage of house rent data from municipalities, (iii) derivation of gross rental estimates for rural dwellings on the basis of data obtained from the village panchayats, (iv) the use of results of the *All India Rural Debt and*

workers in 1961 under 'trade' were observed to be lower than in 1951. Such faulty and unrealistic trends were mostly attributable to non-comparability of the economic data of the two censuses. Under these circumstances it was not thought desirable to adopt the 1951-61 decadal trends of working force for projecting the 1961 figures to post 1961 period.

Investment Survey for cost of repairs of rural dwellings, and (v) classification of taxes on dwellings as direct tax.

XIV Public Administration and Defence.

The improvements relate to the narrowing down of the scope of public administration and defence by excluding governmental activities other than regulatory and administrative to the extent possible and the inclusion of the issue department of the RBI.

XV Other Services.

In the revised series the annual estimates of working force have been prepared on the basis of 1951 and 1961 population census economic data in place of similar data for 1941 and 1951 censuses. The estimates of earnings per worker, in the case of the conventional series, rested on observations culled out from scattered source material of doubtful validity. Such observations related mostly to years earlier than the base year. For the revised series, the estimates are based on actual observations collected through a sample enquiry relating to the year 1963-64. In the conventional series, workers under the sub-group 'services/ activities not elsewhere classified' were reallocated to other sub-groups on a *pro-rata* basis. In the revised series, they are shown as a separate group for lack of empirical basis for reclassifying them into other distinctly classified groups. In the revised series, the earnings of secondary workers have also been taken into account in estimating the total gross/net product from 'other services' industry group. In the case of education, medical and health, legal and sanitary services, the estimates relate to the entire activity, rather than the part undertaken by the private sector only as was the case with the conventional series.

XVI External Transactions.

The improvements relate to the inclusion of estimates of foreign companies and foreign controlled rupee companies and other factor services in the revised estimates.

APPENDIX III

A Deflators and Indicators used in the Conventional Estimates for arriving National Income at 1948-49 Prices.

1. Agriculture		In all these sectors, physical production for the current year has been evaluated at the base year prices for as many items as possible.
2. Animal Husbandry		
3. Forestry		
4. Fishery		
5. Mining		
6. Factory establishments		
7. Small enterprises		
8. Communication		In the absence of any suitable indicator of the movement of output, an index of consumer prices has been used for deflation purposes. Combined indicator relating to (i) no. of letters etc. carried and (ii) the telegrams sent. The two indicators have been combined by making use of the ratio of base year expenditures, weighted average of ton-miles and passenger miles, the weights being the base year expenditures.
9. Railway		Number of cheque clearances.
10. Banks		Number of Policies.
11. Insurance		Total membership.
12. Co-operative Societies		Deflated value of marketable surplus.
13. Other Commerce and Transport		Deflated consumer expenditure.
14. Professions and liberal arts, domestic service and house property		Number of pupils and the number of law suits. Nil.
15. Teaching and law		
16. Government Administration		

SOURCE :—Final Report of the National Income Committee, Appendix I, page 142-43.

B. DEFLATORS AND INDICATORS USED IN THE REVISED SERIES FOR ARRIVING NATIONAL PRODUCT AT 1960-61 PRICES.

I Agriculture.

The estimates of gross value of output, gross product and net product at constant prices have been prepared by revaluing each item of output and input at 1960-61 prices.

II Forestry and Logging

Major forest products evaluated at 1960-61 prices.

Current value of minor forest products deflated with the help of specially prepared indices of wholesale prices of major forest products.

III Fishing.

- (1) Revaluing the catch of marine fish, inland water fish and subsistence fish at 1960-61 prices.
- (2) Value added by fish curing and net product from collection of pearls, chanks, oysters etc. in the base year are projected to other years by using (a) quantity of fish cured for the former and (b) working force for the latter.

IV Mining and Quarrying.

Revaluing the quantity of mineral output at the pit head price of 1960-61.

V Large-scale Manufacturing.

Carrying forward the bench mark estimates of 1960-61 by twenty industry-groups with the help of appropriate indices of industrial production (1960=100).

VI Small-scale Manufacturing.

- (i) Textiles, tailoring and leather footwear—Weighted average of the production relatives of cloth in decentralised sector representing textiles, total cloth available for consumption representing tailoring and the indicator of the production of leather footwear in the small-scale manufacturing sector.

- (ii) Leather and leather products except footwear:—
Weighted average of the production relatives of raw hides and skins and tanned hides.
- (iii) Wood, glass, stone and ceramics:—Average of the indices of production of non-metallic mineral industries and total population.
- (iv) Metal manufacturing and engineering:—Average of the indices of production of basic metal industries and total population.
- (v) Chemical and chemical products:—Average of the indices of production of chemicals in large-scale manufacturing sector and total population.
- (vi) Food, drink and tobacco:—Oils produced by *ghanis*, quality of tobacco required by the decentralised sector and total food-grains, respectively.
- (vii) Other industries:—Weighted average of the indicators of the six specified industry-groups.

VII Construction.

Deflating current price estimates with the help of the index numbers of average daily wages of rural skilled labour in agriculture.

VIII Electricity, Gas and Water Supply.

- (i) Total quantity of electricity sold to various categories of consumers.
- (ii) Total quantity of gas sold.
- (iii) Working force in water supply.

IX Transport and Communication.

- (i) Railways:—Combined indicator of number of passenger kilometres and tonne kilometres with earnings from passengers and freight traffic in 1960-61 as weights.
- (ii) Communication:—Indicators relate to the total number of postal articles, total number of inland and foreign money orders, total number of telegrams (excluding service telegrams) and total number of telephones, the respective weights for constructing the combined index thereof being the corresponding receipts in 1960-61 from these activities.

(iii) Other transport :

- (a) Mechanised road transport :—Total working force.
- (b) Non-mechanised road transport :—Combined index of industrial and agricultural production with value added from these activities as weights.
- (c) Port trusts :—Volume of traffic handled both for coastal trade and foreign trade.
- (d) Shipping companies :—Combined indicators relating to number of passengers and total cargo handled by Indian Shipping Companies with earnings from the two sources in the year 1960-61 as weights.
- (e) Un-organised sea transport :—Volume of cargo handled by sailing vessels.
- (f) Air transport :—Combined indices relating to number of passenger kilometres and net tonne kilometres, the weights being in proportion to the freight revenue and passenger revenue in the base year 1960-61.
- (g) Indicators used for services incidental to transport are based on estimates of earnings in transport by rail, water and air at 1960-61 prices.

X Trade, Storage, Hotels and Restaurants:

- (i) Trade, Hotels and Restaurants :—A specially prepared index of trading activity with 1960-61 as the base.
- (ii) Storage :
 - (a) Volume index of commodities deposited in the case of Warehousing Corporation.
 - (b) Index of estimated employment in the case of cold storage and other storage facilities.

XI Banking and Insurance.

- (i) Banks :—Annual charges in the total deposits of banks after deflating them by the Economic Adviser's (EA) general index number of wholesale prices.
- (ii) Non-banking financial companies including industrial development and financial corporations :—Total net receipts duly deflated by the EA's general index of wholesale prices.
- (iii) Co-operative Credit Societies :—Membership of Credit

Societies at the end of each year.

- (iv) Life Insurance including Postal Life Insurance:—Combined index of charge in the sum assured and the total amount of life fund both deflated by the EA's general index number of wholesale prices.
- (v) Non-life insurance:—Annual premium receipts (net of claims and surrenders) deflated by the EA's general index of wholesale prices.

XII Real Estate and Ownership of Dwellings.

Estimates of gross rental at 1960-61 prices in respect of ownership of dwellings sector have been prepared by adjusting the base year estimates of gross rental to other years on the basis of physical growth of the number of dwellings over 1951-1961 and deducting from these the cost of repairs and maintenance and allowance for depreciation duly deflated with the indices of construction for urban and rural dwellings. In respect of the real estate industry, however, estimates at constant prices have been obtained by moving forward the 1960-61 estimates of gross/net product on the basis of the indicator relating to number of urban dwellings.

XIII Public Administration and Defence.

The estimates of net product at constant prices have been prepared by making adjustment each year for charges in the rates of pay and allowances of Government employees in relation to those prevalent in 1960-61.

XIV Other Services.

- (i) Educational Services:—Combined indicators of (a) students on rolls and (b) number of teachers.
- (ii) Medical and health services:—Combined indicator of (a) number of medical personnel by different categories and (b) number of hospital beds.

For the remaining industries, indicators relating to working force have been used.

XV External Transactions.

Current prices have been deflated by import price index in view of deficits in the current account in the balance of payments.

SOURCE—*Brochure on Revised Series of National Product for 1960-61 to 1964-65, C.S.O.*

Appendix
STATISTICAL TABLES

TABLE 1
Area, Population and Allied Data Statewise 1961

<i>State/Union</i>	<i>Area thousand sq. kilometres as on 1.1.1966</i>	<i>Population (million) as on 1.1.1966</i>	<i>Percentage of rural population</i>	<i>Density of population per sq. km.</i>	<i>Sex ratio (females per 1000 males)</i>	<i>Percentage of workers</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	275.2	36.2	82.6	131	981	51.9
Assam ¹	203.4	12.2	92.5	60	877	43.31
Bihar	174.0	46.5	91.6	267	994	41.4
Gujarat	187.1	20.6	74.2	110	940	41.1
Haryana	(a)	7.6	82.8	(a)	868	37.9
Jammu & Kashmir ²	222.9	3.6	83.3	...	878	42.8
Kerala	38.9	16.9	84.9	435	1022	33.3
Madhya Pradesh	443.5	32.4	85.7	73	953	52.3
Madras	130.0	33.7	73.3	259	992	45.6
Maharashtra	307.3	39.6	71.8	129	936	47.9
Mysore	191.8	23.6	77.7	123	959	45.5
Nagaland	16.5	0.4	94.8	22	933	59.4
Orissa	155.9	17.5	93.7	113	1001	43.7
Punjab	(a)	11.1	76.9	(a)	854	31.1
Rajasthan	342.3	20.2	83.7	59	908	47.5

(Continued).

Table 1 (Continued)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Uttar Pradesh	294.4	73.7	87.1	251	909	39.1
West Bengal	87.7	34.9	75.5	398	878	31.2
Union Territories of which:	(a)	8.7	65.2	(4)	899	42.6
Delhi	1.5	2.7	11.3	1793	785	32.1
Göa, Daman & Diu	3.7	0.6	83.9	168	1071	41.2
Himachal Pradesh	(a)	2.8	93.7	(a)	938	53.9
Manipur	22.3	0.8	91.3	35	1015	45.9
Pondicherry	0.5	0.4	75.9	780	1013	37.5
Tripura	10.5	1.1	91.0	109	932	38.3
India*	3268.1	439.1	82.0	134	941	43.0

1. Includes NEFA of which area as on 1.1.1966 is 81.4 thousand sq. kms, and population is 337 thousand.

2. The figures exclude population of areas under unlawful occupation of Pakistan and China where census could not be taken.

3. Excludes 297,853 population of NEFA for whom an abridged family schedule was canvassed instead of the general All-India individual slip and household schedules.

(a) According to Punjab Reorganisation Act, 1966, the state of Punjab was re-organised into the States of Haryana and Punjab and the Union Territories of Chandigarh and Himachal Pradesh. Areas of these States and Union Territories are under computation by the Surveyor General of India.

* All India total may not tally with the total of State-wise data on account of rounding.
Source: 1961 Census, Final Population Totals

TABLE 2
Growth of Population in India, 1901-1961

Year	Population (Lakhs)			Percent Growth rate		
	Total	Rural	Urban	Total	Rural	Urban
1901	2383			—		
1911	2520			5.73		
1921	2512	2226	286	(—) 0.30		
1931	2789	2452	337	11.00	10.15	17.83
1941	3185	2742	447	14.23	11.82	32.64
1951	3610	2985	625	13.31	8.86	39.82
1961	4391	3601	790	21.64	20.64	26.40

TABLE 3
Distribution of Population by Sex and Age, 1901—1961 (Per cent)

Age group	1901		1911		1921		1931		1941		1951		1961	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
0-4	12.5	13.3	13.3	14.3	12.1	13.2	14.7	16.0	13.2	14.0	13.1	13.7	14.7	15.5
5-9	14.0	13.8	13.8	13.8	14.8	15.0	13.3	12.8	13.6	13.6	12.6	12.9	14.6	14.9
10-14	12.7	10.9	11.7	10.0	12.5	10.8	12.0	11.2	11.3	10.8	11.4	11.3	11.6	10.8
0-14	39.2	38.0	38.8	38.1	39.4	39.0	40.0	40.0	38.1	38.4	37.1	37.9	40.9	41.2
15-24	16.5	17.2	16.7	17.6	16.0	16.8	17.9	19.2	18.1	18.3	18.9	19.1	16.3	17.1
25-34	17.2	17.5	17.2	17.5	16.9	17.3	16.4	16.2	15.9	16.3	15.4	15.3	15.2	15.5
15-34	33.7	34.7	33.9	35.1	32.9	34.1	34.3	35.4	34.0	34.6	34.3	34.4	31.5	32.6
35-44	12.6	12.2	12.6	11.9	12.6	11.9	11.9	11.0	12.1	11.6	12.0	11.3	11.4	10.6
44-59	9.9	9.6	9.9	9.4	10.1	9.5	9.9	9.4	10.9	10.5	11.1	10.6	10.7	9.8
35-59	22.5	21.8	22.4	21.3	22.7	21.4	21.8	20.4	23.0	22.1	23.1	21.9	22.1	20.4
60 and above	4.6	5.5	4.8	5.5	5.0	5.5	3.9	4.2	4.9	4.9	5.5	5.8	5.5	5.8

Source : Census of India—Paper No. 2 of 1963—Age Tables, Table 2(a), pp. 39,

TABLE 4
Statement showing Illiterate Persons as percentage to total Population, 1961 Census

State/Union (1)	Rural		Urban		Males (6)	Females (7)
	Persons (2)	Males (3)	Persons (5)	Males (6)		
A.P.	83.2	74.9	91.6	58.2	46.4	70.7
Assam	75.1	65.2	86.2	42.8	35.9	53.0
Bihar	83.9	72.8	94.8	56.8	44.5	72.0
Gujarat	75.9	65.5	86.8	51.2	40.4	63.3
J. & K.	92.4	87.1	98.4	71.7	63.2	81.9
M. P.	87.3	78.2	96.6	56.5	43.5	71.6
Madras	75.3	62.2	88.4	50.1	37.3	63.3
Maharashtra	78.5	66.5	90.7	48.9	38.4	62.1
Mysore	80.0	69.5	90.8	55.8	44.8	67.8
Orissa	79.9	67.0	92.5	55.8	42.5	72.4
Punjab	81.6	73.1	91.3	52.6	43.6	63.6
Rajasthan	89.1	81.7	97.3	62.4	49.1	77.5
U. P.	85.7	76.3	95.8	59.9	50.0	72.2
West Bengal	78.4	67.1	90.3	47.1	40.4	56.7
Kerala	54.6	46.5	62.5	45.1	37.2	53.0
A. & N. Islands	71.1	62.3	85.0	49.8	41.5	64.3
Delhi	74.9	61.5	90.6	43.8	36.5	53.0
H. P.	84.7	74.8	95.4	44.8	36.5	56.2
Laccadive, Minicoy and Amindivi Islands	76.7	64.2	89.0	49.2	29.7	69.1
Manipur	71.5	57.3	85.5	47.9	38.7	58.3
Tripura	82.9	73.6	92.8	52.3	43.7	60.9
Dadra & Nagar Haveli	90.5	85.3	95.9	82.3	32.3	53.9
Goa, Daman & Diu	72.5	64.4	80.0	43.4	35.7	56.9
Pondicherry	68.7	55.0	87.8	98.6	43.9	51.7
NEFA	92.9	78.6	90.0	59.4	42.5	69.6
Nagaland	84.2	81.8	96.8	53.0	53.0	65.5
Sikkim	88.9	70.9	91.5	53.0		
INDIA	81.0					

Source : Census of India 1961; Volume I, Part II C (1), Social and Cultural Tables

TABLE 3
Percentage Distribution of Workers by Industrial Categories

<i>Industrial categories</i>	1901	1911	1921	1931	1951	1961
<i>Agriculture</i>						
Cultivators	50.6	49.7	54.4	45.0	50.1	52.8
Agriculture labourers	17.0	20.6	17.5	24.7	19.7	16.7
Mining, quarrying, livestock, forestry, fishing, hunting and plantations, orchards and allied activities	4.3	4.8	4.5	5.1	3.1	2.8
<i>Manufacturing</i>	*	*	*	*	*	6.2
Household Industry						
Manufacturing, other than household industry	11.8	10.0	9.4	9.0	9.0	4.2
Construction	0.8	1.0	0.8	1.2	1.0	1.2
Trade and commerce	6.0	5.4	5.8	5.5	5.1	4.0
Transport, storage and communications	1.1	1.0	0.8	1.0	1.5	1.6
Other services	8.4	7.5	6.8	8.5	10.5	10.5
<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0

* Included in 'mining, quarrying, livestock, forestry, fishing, hunting and plantations, orchards & allied activities' and 'manufacturing, other than household industry'.

Source : 1961 Census : Final Population Totals, Census of India, Paper No. 1 of 1962.

TABLE 6
Employment in the Public Sector

(Figures in lakhs)

	(1)	<i>At the end of</i>						
		March 1956	March 1961	March 1962	March 1963	March 1964	March 1965	March 1966
<i>A. By Branch of the Public Sector</i>								
1. Central Government	18.58	20.90	21.86	23.29	24.34	25.68	26.36	26.87
2. State Government	22.65	30.14	30.87	31.98	34.33	35.85	37.23	37.67
3. Quasi Government	3.68	7.73	8.79	9.95	10.97	12.06	13.18	14.02
4. Local Bodies	7.43	11.73	12.65	14.31	14.90	15.98	17.01	17.78
Total	52.34	70.50	74.17	79.53	84.54	89.57	93.78	96.34
<i>B. By Industrial Classification</i>								
1. Agriculture, livestock, forestry and fishing	0.14	1.80*	1.74	1.82	2.03	2.09	2.26	2.32
2. Mining and quarrying	0.54	1.29	1.45	1.60	1.57	1.61	1.60	1.76
3. Manufacturing	2.05	3.69	4.21	5.09	5.81	6.35	6.70	6.95
4. Construction	4.16	6.03	6.41	6.62	7.15	7.40	7.66	7.63
5. Electricity, gas, water and sanitary services	0.77	2.24	2.34	2.44	2.64	2.91	3.03	3.37
6. Trade and commerce	0.43	0.94	1.09	1.20	1.33	1.43	1.55	1.66
7. Transport, storage and communications	13.92	17.24	17.97	18.86	19.37	20.44	20.94	21.15
8. Services	30.33	37.27	38.96	41.90	44.64	47.34	50.04	51.50
Total	52.34	70.50	74.17	79.53	84.54	89.57	93.78	96.34

*The bulk of the increase is due to the reclassification of certain categories from "services" division to this head.

③ Provisional.

Source: Economic Survey, 1968-69, Government of India.

TABLE 7
Employment in the Private Sector

(Figures in Lakhs)

	At the end of						(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
	March 1961	March 1962	March 1963	March 1964	March 1965	March 1966										
1. Agriculture, livestock, forestry and fishing*	6.7	7.4	7.4	7.2	8.9	9.0									8.7	8.5
2. Mining and quarrying	5.5	4.8	5.2	5.0	4.9	5.1									4.8	4.3
3. Manufacturing	30.2	30.5	32.7	34.2	36.1	38.6									37.5	37.1
4. Construction**	2.4	1.8	1.8	1.7	1.9	2.5									2.2	1.5
5. Electricity, gas, water and sanitary services.	0.4	0.4	0.4	0.4	0.4	0.4									0.4	0.5
6. Trade and commerce	1.6	1.9	1.9	2.0	2.2	3.3									3.5	3.5
7. Transport, storage and communications.	0.8	1.2	1.4	1.1	1.1	1.2									1.2	1.0
8. Services	2.8	3.6	3.7	4.3	4.8	8.0									8.5	8.8
TOTAL	50.4	51.6	54.5	55.9	60.3	68.1									66.8	65.2

*This includes all plantations, except coffee for which the coverage is incomplete.

**Coverage in construction, particularly on private account, is known to be inadequate.

@Provisional.

NOTE :—From March 1961 to March 1965, the data relate to non-agricultural establishments in the private sector employing 25 or more workers. Since March, 1966, the coverage has been extended so as to include establishments employing 10 to 24 workers also on voluntary basis.

Source : Economic Survey, 1968-69, Government of India,

TABLE 8

Number of Employment Exchanges, Registrations, Persons on Live Register of the Employment Exchanges and Number of Placings through Employment Exchanges

(Figures as of 31st December of each year)

<i>Year</i>	<i>No. of employment exchanges</i>	<i>No. of registrations</i>	<i>No. of persons on the live register ('000 numbers)</i>	<i>No. of placings ('000 numbers)</i>
(1)	(2)	(3)	(4)	(5)
1950	123	1210	331	331
1955	136	1584	692	170
1960	296	2733	1606	306
1961	325	3733	1833	404
1962	342	3845	2380	458
1963	353	4152	2518	536
1964	365	3832	2493	545
1965	376	3958	2585	570
1966	396	3872	2622	507
1967	399	3912	2740	431

Source: Indian Labour Statistics, Labour Bureau.

Table 9
Trade Unions and their membership classified into Workers' and Employers' Unions

Years	Number of registered Trade Unions						Membership of unions submitting returns (in thousands)			
	Workers		Employers		Total		Workers'		Employers'	
	On register	Submitting returns	On register	Submitting returns	On register	Submitting returns	N.A.	N.A.	N.A.	N.A.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
1950-51	3,714	1,976	52	37	3,766	2,013	N.A.	N.A.	N.A.	N.A.
1955-56	8,016	3,970	79	39	8,095	4,004	2,270	5	2,275	5
1960-61	11,145	6,717	167	105	11,312	6,822	4,000	1	4,013	1
1961-62	11,416	6,954	198	133	11,623	7,087	3,960	18	3,977	18
1962-63	11,610	7,109	207	137	11,817	7,246	3,666	15	3,681	15
1963-64	11,740	7,106	244	144	11,984	7,250	3,956	21	3,977	21
1964-65	12,146	6,999	272	156	12,418	7,155	4,057	25	4,082	25
1965-66	6,552	3,062	213	11	6,765	3,073	1,828	19	1,847	19

Source : Indian Labour Statistics, Labour Bureau

TABLE 10
Statistics of Land Utilisation in India

(Figures in, 1000 hectares)

Year	Classification of Area										Net area sown once	Area sown more than once	Total area sown
	Total Area according to Surveyor General of India	Village records	Forests	Other land not available for cultivation	Land under permanent pastures and groves	Land under miscellaneous tree crops and groves	Cultivable waste	Other than current fallows	Current fallows	Fallow land			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1950-51	284315	40482	47517	6675	19828	22943	17445	10679	118747	13146	131893		
1955-56	291917	51343	48396	11473	5885	21537	24127		129156	18155	147311		
1960-61	298862	55769	49997	13900	4363	19090	22585		133157	19559	152716		
1961-62	326287	299275	54542	50471	14109	4505	18641	21655	135352	20747	156099		
1962-63	305348	60843	50360	14106	4560	17911	10203	11024	136341	20423	156764		
1963-64	305603	60997	50235	14601	4386	17652	10114	11196	136422	20424	156846		
1964-65	305600	60348	50631	14808	4138	17332	9177	11304	137862	21016	158878		
1965-66	305624	60258	50712	14956	4109	17180	9314	13266	135829	19069	154898		

Source: Directorate of Eco. and Stat., Ministry of Food and Agriculture

TABLE 12

Estimated number of Operational Holdings and Area Operated by size of Holdings : 1961-62

Area of Holdings (hectares)	Number Million	Area Operated	
		Per cent	Million hectares
Less than 1 hectare	19.8	39.1	9.2
1 to 3 hectares	18.0	35.5	32.1
3 to 5 hectares	6.1	12.0	23.0
5 to 10 hectares	4.5	8.9	30.6
10 to 20 hectares	1.8	3.5	23.1
20 hectares and above	0.5	1.0	15.5
Total	50.7	100.0	133.5
			100.0

Note : An operational holding refers to all lands used wholly or partly for agricultural production.

Source : National Sample Survey, 17th round.

Table 13
Index Numbers of Agricultural Productivity
(Agricultural Year—1949-50 = 100)

<i>Commodity Group</i>	<i>1950-51</i>	<i>1955-56</i>	<i>1960-61</i>	<i>1961-62</i>	<i>1962-63</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>
I. Foodgrains									
Rice	87.1	110.8	123.6	125.5	113.5	126.0	130.9	106.0	104.2
Jowar	89.6	86.6	119.3	98.5	118.4	111.9	121.6	96.3	111.2
Bajra	86.0	88.5	83.1	93.8	104.8	101.3	110.2R	91.7	104.9
Mahs	87.6	99.6	109.2	112.3	116.5	116.8	118.3	117.0	115.6
Ragi	94.8	128.4	116.9	127.0	129.4	128.7	122.2	81.9	105.8
Small Millets	92.0	94.2	95.1	103.6	94.3	107.3	106.6	91.8	87.2
Kharif Cereals	88.2	103.0	117.2	118.5	114.1	122.7	128.3	104.4	104.6
Wheat	101.2	103.6	122.9	128.5	114.6	105.4	132.1	119.1	126.9
Barley	107.9	110.2	116.9	125.7	106.0	97.2	123.3	118.6	112.7
Rabi Cereals	102.6	105.7	123.8	129.8	115.3	106.5	133.8	121.4	127.1
Cercals	90.8	103.8	118.5	121.2	114.4	119.6	129.3	107.5	108.7
Gram	107.5	117.7	143.3	128.7	124.1	102.4	138.4	112.0	96.0
Tur	98.2	101.4	101.6	66.8	76.6	64.6	89.1	82.3	82.0
Other Pulses	92.8	90.1	86.0	87.4	84.3	79.0	89.0R	77.0	70.5
Pulses	99.8	101.4	109.0	99.8	96.8	84.8	105.7	88.7	79.4
Foodgrains	92.4	103.0	117.3	118.2	112.0	114.9	126.3	105.6	105.8
II. Non-Foodgrains									
Groundnut	89.7	87.1	87.4	85.1	81.6	90.3	98.3	68.6	74.6
Sesamum	94.3	94.2	73.3	82.6	96.2	90.9	97.9	84.1	74.2
Rapeseed and Mustard	88.4	80.6	112.1	102.0	100.0	72.0	122.2	106.2	99.8
Linseed	95.2	97.7	81.8	86.3	83.2	70.0	90.1	71.6	66.2
Castorseed	85.6	99.2	104.5	101.8	96.1	96.0	108.3R	85.9	86.2

(Continued)

Commodity Group	1950-51	1955-56	1960-61	1961-62	1962-63	1963-46	1964-65	1965-66	1966-67
Oilseeds	92.5	91.0	98.5	96.0	94.2	92.0	110.7	85.2	87.0
Cotton	92.9	93.8	130.9	108.0	127.3	125.1	129.6R	113.5	119.2
Jute	87.6	90.9	93.9	99.0	91.8	100.0	102.5	84.4	95.7
Mesta	100.0	143.0	117.1	125.6	125.6	134.4	125.2R	107.8	108.4
Fibres	91.4	93.2	116.2	113.1	120.9	122.0	123.5	105.0	113.4
Tea	103.4	105.3	114.4	126.3	123.1	122.4	130.2R	126.6	128.3
Coffee	108.4	188.2	194.2	175.6	181.7	188.3*	184.8R	193.4*	273.2*
Rubber	111.8	114.1	76.8	76.3	85.7	85.3	189.9	99.1	99.1*
Plantation Crops	105.0	107.9	104.5	110.6	108.3	106.1	109.5	107.7	111.3
Sugarcane (Gur)	97.7	95.7	112.4	104.3	100.4	113.4	115.5R	107.0	100.2
Tobacco	94.7	95.8	99.0	105.0	111.1	107.7	115.5R	105.4	115.7
Potatoes	104.9	110.7	107.9	99.7	113.0	86.7	118.1	117.3	101.9
Pepper (Black)	96.7	118.2	104.2	104.2	96.2	88.4	88.2	85.7	84.7
Chillies (Dry)	103.5	104.3	109.7	110.9	117.0	114.7	114.6R	103.1	104.8
Ginger (Dry)	132.2	141.9	134.5	142.4	143.6	146.4	148.2R	153.8	153.1
Miscellaneous Crops	98.2	105.8	117.7	113.1	111.7	115.7	121.5	113.9	108.3
Non Foodgrains	95.6	191.7	108.1	102.1	100.4	103.0	113.4	102.6	99.1
All Commodities	95.7	01.6	117.7	117.0	112.3	115.4	127.2	110.1	107.8

R—Revised.

* Based on Provisional Estimates.

Note: The indices for 1964-65 and 1965-66 are generally based on Revised Estimates, while those for 1966-67 are generally based on Final Estimates. The indices for these years are, therefore, subject to revision.

Source: Ministry of Food, Agriculture, Community Development and Cooperation.

TABLE 15
Index Numbers of Industrial Production
(Base: 1960=100)

	Weight	1951	1955	1961	1962	1963	1964	1965	1966	1967
General Index	100.00	54.8	72.7	109.1	119.7	129.6	140.8	150.9	152.4	151.1
Mining and Quarrying	9.72	66.6	74.6	105.4	115.2	123.2	119.4	131.7	135.8	
Food manufacturing	12.09	66.9	75.9	108.6	110.2	108.6	118.3	122.9	127.2	113.2
Beverage and tobacco industries	2.22	58.0	61.7	107.0	111.7	109.2	126.1	147.6	158.9	149.4
Cigarettes	2.15	N.A.	N.A.	106.7	111.2	108.4	125.0	146.2	158.3	147.4
Manufacturing of textiles	27.06	79.7	94.1	102.8	105.7	109.7	115.4	114.8	108.9	107.6
Cotton textiles	21.18	N.A.	N.A.	104.8	104.4	105.5	112.8	111.6	106.5	104.9
Woollen textiles	0.63	N.A.	N.A.	99.3	119.1	195.0	162.4	136.4	129.6	122.5
Jute manufacturing	3.97	N.A.	N.A.	89.1	110.8	118.8	115.1	120.3	100.4	104.1
Paper and paper products	1.61	38.5	55.8	105.8	109.4	130.2	137.3	147.1	160.0	167.1
Rubber products	2.22	56.1	65.4	112.9	121.8	135.5	143.0	159.4	160.2	171.4
Chemicals and chemicals products	7.26	42.4	60.1	113.4	121.8	134.0	145.6	151.9	166.7	172.2
Petroleum products	1.34	11.0	56.1	106.0	114.6	133.1	146.7	156.3	195.9	234.2
Non-metallic mineral products	3.85	39.0	53.7	106.9	116.3	130.3	138.6	149.2	149.1	155.8
Basic metals	7.38	46.5	53.3	118.7	143.0	171.7	174.4	180.0	186.4	178.1
Metal products	2.51	30.7	54.1	112.4	116.3	130.4	145.8	205.6	209.6	192.1
Machinery, except electrical	3.38	22.2	35.5	121.2	150.2	181.3	215.7	238.8	281.8	
Electrical Machinery, apparatus and appliances	3.05	26.3	49.0	110.0	130.3	153.0	174.2	204.4	224.9	243.4
Transport equipment	5.37	7.77	19.6	99.2	116.7	149.9	156.7	192.1	204.3	164.5
Electricity			35.7	51.5	116.3	130.7	150.9	173.6	190.9	207.8

Source : Central Statistical Organisation.

TABLE 16
General Index of Industrial Production

Year	(Base : 1949=100)	(Base 1956=100)	(Base 1960=100)
1947	97		
1948	108		
1949	106		
1950	105		
1951	117		
1952		74	55
1953		76	57
1954		78	58
1955		83	63
1956		92	73
1957		100	78
1958		104	83
1959		108	84
1960		117	90
1961		130	100
1962		141	111
1963		158	121
1964		166	131
1965		177	142
1966		187	151
1967		192	152
			151

TABLE 16
General Index of Industrial Production

Year	(Base : 1949=100)	(Base 1956=100)	(Base 1960=100)
1947	97		
1948	108		
1949	106		
1950	105		
1951	117		
1952		74	55
1953		76	57
1954		78	58
1955		83	63
1956		92	73
1957		100	78
1958		104	83
1959		108	84
1960		117	90
1961		130	100
1962		104	111
1963		158	121
1964		166	131
1965		177	142
1966		187	151
1967		192	152
			151

TABLE 17
India's Overall Trade Position

							(Rs. Crores)			
	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
Imports	643.8(*)	647.9	650.2	970.0	701.6	610.2	656.3	678.8	840.6	1034.9
Exports (*)()	458.7	506.0	600.6	732.9	577.1	530.5	592.4	596.3	604.5	561.1
Trade Balance	185.1	-141.9	-49.6	-237.1	-124.5	-79.7	-63.9	-82.5	-236.1	-471.8
	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68
Imports	906.3	960.8	1139.7	1107.1	1135.6	1222.8	1349.0	1408.5	2078.4	1974.4
Exports (*)()	580.8	639.7	660.2	679.7	713.6	793.2	816.3	805.6	1156.5	1198.7
Trade Balance	-325.5	-321.1	-479.5	-427.4	-422.0	-429.6	-532.7	-602.9	-921.9	-775.6

(*) Excludes land trade with Afghanistan and Iran.

(**) Including re-exports.

Note : Figures are inclusive of : (1) Goa, Daman and Diu from 1960-61 onwards.
(2) Exports by Parcel post of precious and semi-precious stones and pearls from 1962-63.

(3) Land borne trade with Nepal from 1962-63.

Since 1966-67, the figures are given in post-devaluation rupees.
The figures in brackets are in million U.S. Dollars.
The figures are provisional and subject to revision.

Source : D.G.C.I.&S., Calcutta.

TABLE 18
Index Numbers of Exports, Imports and Terms of Trade

Year	Exports			Imports			Terms of trade (*)
	Quantity	Average unit value	Quantity	Average unit value	Quantity	Quantity	
1953-54	100	92	(Base : 1952-53=100)	93	92	100	
1954-55	105	98		110	89	110	
1955-56	115	90		116	87	103	
1956-57	110	94		137	91	103	
1957	119	94		156	98	96	
1958	108	93		140	92	101	
			(Base : 1958=100)				
1959	107	100		110	93	107	
1960-61	100	110		128	96	115	
1961-62	105	109		121	98	111	
1962-63	112	106		131	94	113	
1963-64	126	105		135	97	108	
1964-65	135	107		146	99	108	
1965-66	124	113		154	104	109	
1966-67†	119	169		149	150	113	
1967-68	122	169		166	136	124	

†Relates to the average of ten months from June 1966 to March 1967. The figures for April and May, 1966 have not been taken into account as they are not comparable with the figures of the post-devaluation period.

(*)The terms of trade are the ratios of overall export unit value indices to similar import indices.
Source : D.G.C.I.&S.

TABLE 19
Working Class Consumer Price Index Numbers
(1949=100)

Year	<i>Ahmedabad</i>	<i>Bombay</i>	<i>Calcutta</i>	<i>Madras</i>	<i>Kanpur</i>	<i>Jamshedpur</i>	<i>Delhi</i>	<i>Gauhati</i>	<i>All India</i>		<i>Financial year*</i>
									<i>Calendar year</i>	<i>All India</i>	
1950	104	102	101	91	105	100	98	101	101	(101)	101 (N.A.)
1951	105	108	104	103	94	116	110	105	105	(104)	104 (N.A.)
1952	104	110	98	102	92	112	109	111	103	(102)	104 (N.A.)
1953	111	118	98	109	95	112	106	102	106	(109)	106 (108)
1954	98	117	95	106	85	102	105	95	101	(101)	99 (98)
1955	87	110	92	99	78	98	99	87	96	(92)	96 (94)
1956	98	115	98	111	89	106	109	96	105	(105)	107 (108)
1957	104	120	105	116	94	115	114	103	111	(112)	112 (111)
1958	110	129	110	124	98	123	113	103	116	(118)	118 (121)
1959	125	134	110	133	98	125	120	98	121	(125)	123 (126)
1960	120	137	113	143	99	120	120	103	124	(126)	124 (125)
1961	121	140	114	148	102	123	127	106	126	(126)	127 (126)
1962	122	145	120	150	107	129	130	112	130	(130)	131 (131)
1963	121	146	**	151	100	**	134	111	134	(135)	137 (138)
1964	134	168	**	169	**	**	149	124	152	(155)	157 (162)
1965	164	182	**	190	**	**	160	134	166	(172)	169 (174)
1966	179	207	**	203	**	**	180	151	184	(190)	191 (198)
1967	213	228	**	215	**	**	214	183	209	(222)	213 (228)

* Beginning April.

** For Calcutta, Kanpur and Jamshedpur, the old series with base (1949=100) has been discontinued.
Note : Figures in brackets are indices for food component.

Source : Ministry of Labour, Employment and Rehabilitation.

TABLE 20
Index Numbers of Consumer Prices : International Comparisons
(1958=100)

Country	1950	1956	1961	1964	1965	1966	1967	Increase between 1950 & 1967-per cent per annum (Compound)
Argentina	26	61	309	600	771	1,020	1,310	26.2
Australia	60	96	108	111	116	119	123	4.3
Brazil	27	73	256	1,270	2,050	3,000	3,890	34.0
Canada	82	94	103	108	111	115	119	2.2
Ceylon	92	95	100	107	107	107	109	1.1
Chile	7	63	167	400	512	632	747	31.6
Egypt—U.A.R.	97	96	101	103	118	128	n.a.	1.8 (a)
France	64	85	114	129	132	136	140	4.6
Germany—West	86	96	105	114	118	122	124	1.9

(Continued)

(Table 20 Continued)

Ghana	80	99	110	139	174	183	172	4.6
India	87	90	109	130	143	159	180	4.4
Italy	76	96	104	124	129	132	138	3.5
Japan	71	96	111	132	142	149	155	4.7
Malaysia	n.a.	n.a.	97	99	99	100	107	0.8 (b)
Mexico	52	84	109	114	118	123	127	5.4
Netherlands	77	92	105	119	126	133	137	3.4
New Zealand	68	94	106	115	119	122	120	3.9
Norway	67	93	105	120	123	129	135	4.2
Pakistan	78	89	105	110	115	126	134	3.2
Philippines	97	95	105	127	130	138	146	2.4
Sudan	65	92	109	120	117	119	131	4.2
Sweden	66	91	107	119	123	133	138	4.5
Switzerland	88	96	103	114	118	124	129	2.1
Thailand	60	90	96	101	102	106	110	3.6
U.K.	68	94	104	115	121	126	129	3.8
U.S.A.	83	94	103	107	109	112	116	2.0
Yugoslavia	101	93	121	157	211	263	286	6.3

(a) Compound rate of increase between 1950 and 1966.
 (b) Compound rate of increase between 1958 and 1967.

Source : International Financial Statistics, International Monetary Fund.

TABLE 21
Assets and Liabilities of the Reserve Bank of India
(Issue and Banking Departments Combined—Rs. crores)

Assets	1938-39	1950-51	1955-56	1960-61	1965-66	1966-67	1967-68	September 6, 1968
1. Gold and bullion*	44	40	40	118	116	116	116	116
2. Foreign Assets	74	884	746	136	110	235	295	314
3. Rupee coin	71	55	103	120	94	78	79	82
4. Rupee securities	39	586	726	1,813	2,718	2,923	3,003	3,139
5. Loans and advances to Governments	—	2	—	39	211	71	120	70
6. Other loans and advances	—	17	80	185	245	317	311	293
7. Bills purchased and discounted	3	8	12	39	53	228	169	158
8. Other assets	1	10	18	20	43	37	60	34
9. Total assets or liabilities	232	1,601	1,725	2,470	3,590	4,005	4,153	4,206
<i>Liabilities</i>								
10. Notes in circulation	189	1,247	1,467	1,985	2,866	3,020	3,194	3,221
11. Deposits:	32	320	199	264	375	569	533	610
(a) Central Government	9	162	67	76	51	117	53	99
(b) Other Governments	11	26	62	29	26	39	14	13
(c) Banks	11	59	53	71	104	134	137	140
(d) Others	1	72	17	88	194	279	329	358
12. Other liabilities	11	83	59	221	349	416	426	375

Note : Figures relate to last Friday of the period.

* Valued at the statutory rate of Rs. 21.24 per tola upto October 5, 1956 and at Rs. 63.50 per tola thereafter.

Source : Reserve Bank of India.

TABLE 22
Analysis of Money Supply Variations

(Rs. Crores)

	(1)	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	Outstand.
	(2)	Mar. 31	Mar. 31	Mar. 31	Mar. 31	Mar. 31	Mar. 31	Mar. 31	Ing as on
	(3)	to	to	to	to	to	to	to	Mar. 29
	(4)	(5)	(6)	(7)	(8)	(9)			1968
<i>A. Money Supply with the Public (1+2+3)</i>	188	260	475	335	443	377	403	5352	
1. Currency with the Public	109	180	226	163	277	142	180	3376	
2. Other Deposits with the Reserve Bank	4	5	9	4	-19	24	15	56	
3. Bank Money	75	75	240	168	185	211	208	1919	
<i>B. Factors affecting Money Supply Variations</i>									
1. Net Bank Credit to Govt. Sector (a+b)	269	272	288	290xx	518②	278†	239	4313	
(a) Reserve Bank's net credit to Govt. (1+II)	171	200	213	149xx	404④	195†	160	3304	
I. To Central Govt. (i+ii+iii—iv)	106	267	175	136xx	292④	333†	86	3198	
(i) Rupee Securities	157	225	165	80	361	217†	80	3003	
(ii) Bills purchased and discounted by RBI	14	9	14	42	-3	112	-59	169	
(iii) Rupee Coin	-3	-1	-7	-11	-5	-16	1	79	
(iv) Deposits of Central Govt.	+62	-34	-4	-25xx	+61②	-19	-64	53	

(Continued)

(Continued Table 22)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
II. To State Govts. (i—ii)									
(i) Loans and advances to State Govts.	65	-67	38	13	112	-138	74	106	
(ii) Deposits of State Govts.	47	-36	32	4	111	-126	49	12	
(b) Bank's holding of Govt. securities (x)	-18	+31	-6	-9	-1	+12	-25	14	
2. Net Bank Credit to Private sector (a—b)	98	72	75	141	114	83	79	1009	
(a) Financial Assets of banks	-28	102	210	35	60	182	176	1376	
(b) Non-monetary Liabilities of Banks (x)	134	222	264	239	290	427	419	3486	
3. Net Foreign Exchange Assets of the RBI	162	120	54	204	230	246	243	2110	
4. Govt.'s net Currency Liabilities to the Public	-68	-27	27	-33xx	-16@	-23†	26	151	
5. Net non-monetary Liabilities of the RBI	20	9	20	18	13	22	7	317	
6. Non-identifiable net non-monetary Liabilities of Banks (including some errors and omissions)	8	-28	-39	-30	-31	-54†	12	422	
	-13	-68	-31	55	-101	-28	-57	383	

+ Provisional.

(x) Adjusted for transfer of U.S. rupee funds from State Bank to RBI on account of PL 480.

(xx) Adjusted for sale of gold by the Govt. to Reserve Bank of India.

@ Adjusted for purchase of gold by the Govt. from the RBI.

† Adjusted for the re-evaluation of the Reserve Bank's assets after the change in the par value of the rupee.

TABLE 24
Unbanked Towns In India

States	Number of unbanked towns (as of mid-April 1962)	Towns with population below 5,000			Population between 5,000 and 10,000			Population between 10,000 and 20,000			Population above 20,000		
		1	2	3	4	5	6	7	8	9	10	11	12
1. Andhra Pradesh	34	5	23	6	—	—	—	—	—	—	—	—	—
2. Assam	26	9	11	5	—	—	—	—	—	—	—	—	—
3. Bihar	52	8	28	15	—	—	—	—	—	—	—	—	—
4. Gujarat	5	2	2	1	—	—	—	—	—	—	—	—	—
5. Jammu & Kashmir	27	24	2	1	—	—	—	—	—	—	—	—	—
6. Kerala	19	—	8	9	—	—	—	—	—	—	—	—	—
7. Madhya Pradesh	79	13	57	8	—	—	—	—	—	—	—	—	—
8. Madras	91	26	44	21	—	—	—	—	—	—	—	—	—
9. Maharashtra	50	10	32	8	—	—	—	—	—	—	—	—	—
10. Mysore	37	19	13	4	—	—	—	—	—	—	—	—	—
11. Orissa	17	3	9	5	—	—	—	—	—	—	—	—	—
12. Punjab	14	9	5	—	—	—	—	—	—	—	—	—	—
13. Haryana	9	6	3	—	—	—	—	—	—	—	—	—	—
14. Himachal Pradesh	9	8	—	—	—	—	—	—	—	—	—	—	—
15. Rajasthan	21	2	—	—	—	—	—	—	—	—	—	—	—
16. Uttar Pradesh	59	8	30	16	—	—	—	—	—	—	—	—	—
17. West Bengal	64	32	19	—	—	—	—	—	—	—	—	—	—
18. Tripura	3	—	—	—	—	—	—	—	—	—	—	—	—
19. Nagaland	1	—	—	—	—	—	—	—	—	—	—	—	—
20. Pondicherry	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	617	165	316	125	—	—	—	—	—	—	—	—	11

Source : Reserve Bank of India Bulletin, April, 1969

TABLE 25A
Conventional Estimates of Domestic Product at Factor Cost by Industry of Origin
(at current prices)

(Rs. abja*)	Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66+	1966-67+	1967-68+
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>agriculture</i>									
1. agriculture, animal husbandry and ancillary activities	66.8	67.5	67.9	79.3	100.7	90.4	109.0	140.4	
2. forestry	1.1	1.2	1.3	1.4	1.5	1.7	1.9	2.0	
3. fishery	1.0	0.7	0.7	0.9	1.4	1.5	2.2	1.9	
4. total of agriculture, mining, manufacturing and small enterprises	68.9	69.4	69.9	81.6	103.6	93.6	113.1	144.3	
5. mining	1.6	1.7	1.9	2.3	2.5	2.8	3.1	3.3	
6. factory establishments	13.2	15.4	16.8	18.5	21.0	23.4	26.2	27.2	
7. small enterprises	11.2	11.7	12.1	12.5	13.7	15.3	16.6	18.1	
8. total of mining, manufacturing and small enterprises	26.0	28.8	30.8	33.3	37.2	41.5	45.9	48.6	
9. communication (post, telegraph & telephone)	0.6	0.6	0.8	0.9	1.1	1.2	1.4	1.5	
10. railways	3.6	3.8	4.6	5.1	5.3	5.6	5.7	5.8	

(Continued)

(Continued Table 25A)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11. organised banking and insurance	1.6	1.9	2.1	2.4	3.0	3.8	4.4	5.1
12. other commerce and transport	17.7	18.4	19.0	19.7	21.5	23.8	25.7	27.7
13. total of commerce, transport and communication <i>other services</i>	23.5	24.7	26.5	28.1	30.9	34.4	37.2	40.1
14. professions and liberal arts	7.4	7.9	8.4	9.0	10.1	11.5	12.8	14.2
15. government services (administration)	9.0	10.0	11.3	12.8	14.6	16.9	19.1	20.5
16. domestic services	1.9	2.1	2.2	2.3	2.6	3.0	3.3	3.6
17. house property	5.3	5.5	5.6	5.8	6.0	6.2	6.5	6.7
18. total of other services	23.6	25.5	27.5	29.9	33.3	37.6	41.7	45.0
19. net domestic product at factor cost	142.0	148.4	154.7	172.9	205.0	207.1	237.9	278.0
20. net factor income from abroad	-0.5	-0.7	-0.9	-0.9	-1.1	-1.2	-1.9	-2.1
21. net national product at factor cost	141.5	147.7	153.8	172.0	203.9	205.9	236.0	275.9

*abja=100 crores + provisional

Source : CSO.

TABLE 25B
Conventional Estimates of Domestic Product at Factor Cost by Industry
of Origin—Percentage Distribution

<i>Industry</i>	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66+	1966-67+	1967-68+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>agriculture</i>								
1. agriculture, animal husbandry and ancillary activities	47.2	45.7	44.1	46.1	49.4	43.9	46.2	50.9
2. forestry	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.7
3. fishery	0.7	0.5	0.5	0.5	0.7	0.8	0.9	0.7
4. total of agriculture, mining, manufacturing and small enterprises	48.7	47.0	45.4	47.4	50.8	45.5	47.9	52.3
5. mining	1.1	1.2	1.3	1.3	1.2	1.4	1.3	1.2
6. factory establishments	9.3	10.4	10.9	10.8	10.3	11.4	11.1	9.9
7. small enterprises	7.9	7.9	7.9	7.3	6.7	7.4	7.1	6.5
8. total of mining, manufacturing and small enterprises	18.3	19.5	20.1	19.4	18.2	20.2	19.5	17.6
<i>commerce, transport and communication</i>								
9. communication (post, telegraph and telephone)	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5

(Continued)

(Continued Table 25B)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10. railways	2.5	2.6	3.0	3.0	2.6	2.7	2.4	2.1
11. organised banking and insurance	1.1	1.3	1.3	1.4	1.5	1.8	1.9	1.9
12. other commerce and transport	12.5	12.4	12.4	11.5	10.6	11.6	10.9	10.1
13. total of commerce, transport and communication	16.6	16.8	17.2	16.4	15.2	16.7	15.8	14.6
14. professions and liberal arts	5.2	5.3	5.5	5.2	4.9	5.6	5.4	5.1
15. Government services (administration)	6.4	6.8	7.3	7.4	7.2	8.2	8.1	7.5
16. domestic services	1.4	1.4	1.4	1.4	1.3	1.4	1.4	1.3
17. house property	3.7	3.7	3.7	3.3	2.9	3.0	2.7	2.4
18. total of other services	16.7	17.2	17.9	17.3	16.3	18.2	17.6	16.3
19. net domestic product at factor cost	100.3	100.5	100.6	100.5	100.5	100.6	100.8	100.8
20. net factor income from abroad	-0.3	-0.5	-0.6	-0.5	-0.5	-0.6	-0.8	-0.8
21. net national product at factor cost	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*provisional

Source: CSO.

TABLE 26
Estimates of Net National Product
(at 1948-49 prices)

(Rs. abja*)	<i>industry</i>	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66+	1966-67+	1967-68+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1. Agriculture, animal husbandry and ancillary activities@	59.0	59.1	57.9	59.6	64.9	57.1	57.8	68.8	
2. mining, manufacturing and small enterprises	21.1	22.0	23.0	24.3	25.4	26.8	27.4	27.5	
3. commerce, transport and communication	24.5	25.5	26.4	27.8	29.4	29.5	30.1	31.7	
4. other services@ @	23.2	24.7	26.6	28.7	31.2	34.2	37.1	39.3	
5. net domestic product at factor cost	127.8	131.3	133.9	140.4	150.9	147.6	152.4	167.3	
6. net factor income from abroad	-0.5	-0.7	-0.9	-0.9	-1.1	-1.2	-1.9	-2.1	
7. net national product at factor cost	127.3	130.6	133.0	139.5	149.8	146.4	150.5	165.2	

Source : C.S.O.

@@@comprising professions and liberal arts, government services

*@including forestry and fishery. +provision

TABLE 27A
Gross Domestic Product at Factor Cost by Industry of Origin
(at current prices)

	<i>industry</i>	<i>1960-61</i>	<i>1961-62</i>	<i>1962-63</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66+</i>	<i>1966-67+</i>	<i>1967-68+</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. agriculture	6752	6965	7114	8240	10093	9706	11596	14801	
2. forestry and logging	176	200	208	250	263	290	320	348	
3. fishing	82	92	91	101	115	132	145	158	
Sub-total	7010	7257	7413	8591	10471	10128	12061	15307	
4. mining and quarrying	153	158	191	221	221	253	273	306	
5. large-scale manufacturing	1189	1320	1503	1740	1947	2103	2325	2367	
6. small-scale manufacturing	805	886	967	1110	1213	1256	1357	1493	
7. construction	637	674	727	822	933	1047	1109	1172	
8. electricity, gas and water supply	86	97	112	138	160	188	221	253	
Sub-total	2870	3135	3500	4031	4474	4847	5285	5591	

(Continued Table 27A)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. transport and communication	693	773	872	946	1034	1125	1255	1320
9.1 railways	302	328	371	409	419	464	496	504
9.2 communication	65	74	81	93	107	118	144	148
9.3 transport by other means	326	371	420	444	508	543	615	668
10. trade, storage, hotels and restaurants	1334	1424	1531	1748	2121	2285	2702	3095
Sub-total	2027	2197	2403	2694	3155	3410	3957	4415
11. banking and insurance	161	186	228	253	292	340	360	404
12. real estate and ownership of dwellings	589	621	673	760	807	850	908	960
13. public administration and defence	538	593	668	778	890	992	1112	1205
14. other services	921	983	1044	1118	1258	1399	1574	1760
sub-total	2209	2383	2613	2909	3247	3581	3954	4329
15. Total: gross domestic product	14116	14972	15929	18225	21347	21966	25257	29642

*crore=10 million

†provisional

Source : C.S.O.

TABLE 27B
Gross Domestic Product at Factor Cost by Industry of Origin—Percentage Distribution

<i>Industry</i>	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66+	1966-67+	1967-68+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. agriculture	47.8	46.5	44.6	45.2	47.3	44.2	45.9	49.9
2. forestry and logging	1.3	1.4	1.3	1.4	1.2	1.3	1.2	1.2
3. fishing	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.5
sub-total	49.7	48.5	46.5	47.1	49.0	46.1	47.7	51.6
4. mining and quarrying	1.1	1.1	1.2	1.2	1.0	1.1	1.1	1.0
5. large-scale manufacturing	8.4	8.8	9.4	9.5	9.1	9.6	9.2	8.0
6. small-scale manufacturing	5.7	5.9	6.1	6.1	5.7	5.7	5.3	5.0
7. construction	4.5	4.5	4.6	4.5	4.4	4.8	4.4	4.0
8. electricity, gas and water supply	0.6	0.6	0.7	0.8	0.8	0.9	0.9	0.9
sub-total	20.3	20.9	22.0	22.1	21.0	22.1	20.9	18.9
9. transport and communication	4.9	5.2	5.5	5.2	4.9	5.1	5.0	4.5
9.1 railways	2.1	2.2	2.3	2.2	2.0	2.1	2.0	1.7

(Continued Table 27B)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.2 communication	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5
9.3 transport by other means	2.3	2.5	2.6	2.5	2.4	2.5	2.4	2.3
10. trade, storage, hotels and restaurants	9.5 14.4	9.5 14.7	9.6 15.1	9.6 14.8	9.9 14.8	10.4 15.5	10.7 15.5	10.4 14.9
sub-total								
11. banking and insurance	1.1	1.2	1.4	1.4	1.3	1.5	1.4	1.4
12. real estate and ownership of dwellings	4.2	4.1	4.2	4.2	3.8	3.9	3.6	3.2
13. public administration and defence	3.8	4.0	4.2	4.3	4.2	4.5	4.4	4.1
14. other services	6.5 sub-total	6.6 15.6	6.6 15.9	6.1 16.4	5.9 15.2	6.4 16.3	6.3 15.7	5.9 14.6
5. total: gross domestic product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

+provisional

Source : C.S.O.

TABLE 28A
Gross Domestic Product at Factor Cost by Industry of Origin
(at 1960-61 prices)
(Rs. crores*)

<i>Industry</i>	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66*	1966-67*	1967-68†
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. agriculture	6752	6817	6641	6821	7449	6340	6344	7514
2. forestry and logging	176	186	189	207	204	222	223	222
3. fishing	82	85	80	88	96	98	100	98
sub-total	7010	7088	6910	7116	7749	6660	6667	7834
4. mining and quarrying	153	161	185	205	195	221	232	235
5. large-scale manufacturing	1189	1321	1496	1628	1782	1809	1822	1803
6. small-scale manufacturing	805	870	909	973	1033	1015	1029	1076
7. construction	637	648	686	754	777	793	767	735
8. electricity, gas and water supply	86	99	112	133	146	161	175	198
sub-total	2870	3099	3388	3693	3933	3999	4025	4047

(Continued Table 28A)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. transport and communication	693	739	797	848	890	937	974	1021
9.1 railways	302	316	341	361	366	394	400	413
9.2 communication	65	71	78	87	94	100	106	111
9.3 transport by other means	326	352	378	400	430	443	468	497
10. trade, storage, hotels and restaurants	1334 2027	1422 2161	1494 2291	1611 2459	1721 2611	1722 2659	1757 2731	1804 2825
sub-total								
11. banking and insurance	161	183	195	210	214	218	213	214
12. real estate and ownership of dwellings	589	601	620	647	656	667	685	704
13. public administration and defence	538	588	660	752	831	879	906	955
14. other services	921 sub-total	955 2209	998 2327	1037 2473	1081 2646	1125 2782	1166 2889	1210 2970
15. total: gross domestic product	14116	14675	15062	15914	17075	16207	16393	17789

Source : C.S.O.

*crore=10 million +provisional

TABLE 28B
Gross Domestic Product at Factor Cost by Industry of Origin
Percentage Distribution

Industry	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66+	1966-67+	1967-68+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. agriculture	47.8	46.4	44.1	42.9	43.6	39.1	38.7	42.2
2. forestry and logging	1.3	1.3	1.3	1.3	1.2	1.4	1.4	1.2
3. fishing	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6
sub-total	49.7	48.3	45.9	44.7	45.4	41.1	40.7	44.0
4. mining and quarrying	1.1	1.1	1.2	1.3	1.1	1.4	1.4	1.3
5. large-scale manufacturing	8.4	9.0	9.9	10.2	10.4	11.2	11.1	10.2
6. small-scale manufacturing	5.7	5.9	6.0	6.1	6.0	6.2	6.3	6.1
7. construction	4.5	4.4	4.6	4.8	4.6	4.9	4.7	4.1
8. electricity, gas and water supply	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.1
sub-total	20.3	21.1	22.5	23.2	23.0	24.7	24.6	22.8

(Continued Table 28B)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. transport and communication	4.9	5.0	5.3	5.3	5.2	5.8	5.9	5.7	
9.1 railways	2.1	2.1	2.3	2.3	2.1	2.4	2.4	2.3	
9.2 communication	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	
9.3 transport by other means	2.3	2.4	2.5	2.5	2.5	2.8	2.9	2.8	
10. trade, storage hotels and restaurants	9.5	9.7	9.9	10.2	10.1	10.6	10.7	10.2	
sub-total	14.4	14.7	15.2	15.5	15.3	16.4	16.6	15.9	
11. banking and insurance	1.1	1.3	1.3	1.3	1.3	1.4	1.4	1.3	1.2
12. real estate and ownership of dwellings	4.2	4.1	4.1	4.1	3.8	4.1	4.2	3.9	
13. public administration and defence	3.8	4.0	4.4	4.7	4.9	5.4	5.5	5.4	
14. other services	6.5	6.5	6.6	6.5	6.3	6.9	7.1	6.8	
sub-total	15.6	15.9	16.4	16.6	16.3	17.8	18.1	17.3	
15. total : gross domestic product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*provisional.

TABLE 29A
Net Domestic Product by Industry of Origin
(at current prices)

	Industry		1960-61	1961-62	1962-63	1963-64	1964-65	1965-66+	1966-67+	1967-68+
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1. agriculture	6571	6769	6906	8018	9845	9435	11301	14480		
2. forestry and logging	174	198	206	247	260	287	317	344		
3. fishing	77	86	86	95	108	124	137	149		
sub-total	6822	7053	7198	8360	10213	9846	11755	14973		
4. mining and quarrying	144	149	178	204	204	234	252	283		
5. large-scale manufacturing	1071	1176	1298	1518	1686	1822	2014	2050		
6. small-scale manufacturing	785	864	942	1082	1182	1225	1323	1456		
7. construction	620	653	701	792	894	1003	1063	1123		
8. electricity, gas and water supply	68	77	87	109	127	150	174	197		
sub-total	2688	2919	3206	3705	4093	4434	4826	5109		

(Continued Table 29A)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. transport and communication								
9.1 railways	582	655	736	806	877	958	1051	1102
9.2 communication	252	281	313	353	360	400	414	413
9.3 transport by other means	63	72	80	91	100	113	136	143
10. trade, storage, hotels and restaurants	267	302	343	362	417	445	501	546
sub-total	1301	1389	1494	1706	2069	2229	2636	3020
11. banking and insurance	1883	2044	2230	2512	2946	3187	3687	4122
12. real estate and ownership of dwellings	158	183	224	249	288	335	353	397
13. public administration and defence	386	403	447	528	563	585	622	652
sub-total	538	593	668	778	890	992	1112	1205
14. other services	905	966	1026	1099	1236	1374	1547	1729
sub-total	1987	2145	2365	2654	2977	3286	3634	3983
15. total : net domestic product	13380	14161	14999	17231	20229	20753	23902	28187

*crore=10 million

+provisional.

Source : C.S.O.

TABLE 29B
Net Domestic Product by Industry of Origin - Percentage Distribution

<i>Industry</i>	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66+	1966-67+	1967-68+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. agriculture	49.1	47.8	46.0	46.5	48.7	45.5	47.3	51.4
2. forestry and logging	1.3	1.4	1.4	1.4	1.3	1.4	1.3	1.2
3. fishing	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.5
sub-total	51.0	49.8	48.0	48.5	50.5	47.5	49.2	53.1
4. mining and quarrying	1.1	1.1	1.2	1.2	1.0	1.1	1.1	1.0
5. large-scale manufacturing	8.0	8.3	8.6	8.8	8.3	8.8	8.4	7.3
6. small-scale manufacturing	5.9	6.1	6.3	6.3	5.9	5.9	5.5	5.2
7. construction	4.6	4.6	4.7	4.6	4.4	4.8	4.5	4.0
8. electricity, gas and water supply	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
sub-total	20.1	20.6	21.4	21.5	20.2	21.3	20.2	18.2
9. transport and communication	4.4	4.6	4.9	4.7	4.4	4.6	4.4	3.9

(Continued Table 29B)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.1 railways	1.9	2.0	2.1	2.1	1.8	1.9	1.7	1.5	
9.2 communication	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	
9.3 transport by other means	2.0	2.1	2.3	2.1	2.1	2.2	2.1	1.9	
10. trade, storage, hotels and restaurants	9.7	9.8	10.0	9.9	10.2	10.8	11.0	10.7	
sub-total	14.1	14.4	14.9	14.6	14.6	15.4	15.4	14.6	
11. banking and insurance	1.2	1.3	1.5	1.4	1.4	1.6	1.5	1.4	
12. real estate and ownership of dwellings	2.9	2.9	3.0	3.1	2.8	2.8	2.6	2.3	
13. public administration and defence	4.0	4.2	4.4	4.5	4.4	4.8	4.6	4.3	
14. other services	6.7	6.8	6.8	6.4	6.1	6.6	6.5	6.1	
sub-total	14.8	15.2	15.7	15.4	14.7	15.8	15.2	14.1	
15. total: net domestic product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

+Provisional

Source : C.S.O.

TABLE 30A
Net Domestic Product by Industry of Origin
(at 1960-61 prices)

<i>Industry</i>	<i>1960-61</i>	<i>1961-62</i>	<i>1962-63</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66+</i>	<i>1966-67+</i>	<i>1967-68+</i>	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. agriculture	6571	6627	6441	6610	7226	6108	6095	7247	
2. forestry and logging	174	184	187	205	202	220	221	220	
3. fishing	77	80	76	83	91	93	95	93	
sub-total	6822	6891	6704	6898	7519	6421	6411	7560	
4. mining and quarrying	144	152	172	189	180	204	213	216	
5. large-scale manufacturing	1071	1178	1291	1421	1543	1567	1579	1562	
6. small-scale manufacturing	785	849	886	949	1007	989	1003	1049	
7. construction	620	627	661	727	745	760	736	704	
8. electricity, gas and water supply	68	79	88	107	118	131	139	158	
sub-total	2688	2885	3098	3393	3593	3651	3670	3689	

(Continued Table 30A)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. transport and communication	582	627	673	724	753	798	813	850	
9.1 railways	252	270	287	311	314	340	334	339	
9.2 communication	63	69	76	85	88	96	100	107	
9.3 transport by other means	267	288	310	328	351	362	379	404	
10. trade, storage, hotels and restaurants	1301	1387	1457	1572	1679	1680	1714	1759	
sub-total	1883	2014	2130	2296	2432	2478	2527	2609	
11. banking and insurance	158	179	192	206	210	214	209	210	
12. real estate and ownership of dwellings	386	395	412	437	443	450	464	480	
13. public administration and defence	538	588	660	752	831	879	906	955	
14. other services	905	939	981	1018	1062	1106	1146	1189	
sub-total	1987	2101	2245	2413	2546	2649	2725	2834	
15. total : net domestic product	13380	13891	14177	15000	16090	15199	15333	16692	

*crore=10 million †provisional

Source : C.S.O.

TABLE 30B
Net Domestic Product by Industry of Origin
Percentage Distribution

<i>Industry</i>	<i>1960-61</i>	<i>1961-62</i>	<i>1962-63</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66+</i>	<i>1966-67+</i>	<i>1967-68+</i>	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. agriculture	49.1	47.7	45.4	44.1	44.9	40.2	39.8	43.4	
2. forestry and logging	1.3	1.3	1.3	1.4	1.3	1.5	1.4	1.3	
3. fishing	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	
sub-total	51.0	49.6	47.3	46.0	46.8	42.3	41.8	45.3	
4. mining and quarrying	1.1	1.1	1.2	1.3	1.1	1.3	1.4	1.3	
5. large-scale manufacturing	8.0	8.5	9.1	9.5	9.6	10.3	10.3	9.4	
6. small-scale manufacturing	5.9	6.1	6.3	6.3	6.3	6.5	6.5	6.3	
7. construction	4.6	4.5	4.7	4.8	4.6	5.0	4.8	4.2	
8. electricity, gas and water supply	0.5	0.6	0.6	0.7	0.7	0.9	0.9	0.9	
sub-total	20.1	20.8	21.9	22.6	22.3	24.0	23.9	22.1	

(Continued Table 30B)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. transport and communication	4.4	4.5	4.7	4.8	4.7	5.2	5.3	5.1
9.1 railways	1.9	1.9	2.0	2.0	1.9	2.2	2.2	2.0
9.2 communication	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7
9.3 transport by other means	2.0	2.1	2.2	2.2	2.2	2.4	2.5	2.4
10. trade, storage, hotels and restaurants	9.7	10.0	10.3	10.5	10.4	11.1	11.2	10.5
sub-total	14.1	14.5	15.0	15.3	15.1	16.3	16.5	15.6
11. banking and insurance	1.2	1.3	1.3	1.4	1.3	1.4	1.4	1.3
12. real estate and ownership of dwellings	2.9	2.8	2.9	2.9	2.7	2.9	3.0	2.9
13. public administration and defence	4.0	4.2	4.7	5.0	5.2	5.8	5.9	5.7
14. other services	6.7	6.8	6.9	6.8	6.6	7.3	7.5	7.1
sub-total	14.8	15.1	15.8	16.1	15.8	17.4	17.8	17.0
15. total : net domestic product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

⁺provisional

TABLE 31
National Product and some other related aggregates
(Rs. crores*)
(at current prices)

<i>Item</i>	<i>1960-61</i>	<i>1961-62</i>	<i>1962-63</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66+</i>	<i>1966-67+</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(8)
1. net domestic product at factor cost	13380	14161	14999	17231	20229	20753	23902
2. net factor income from abroad	-72	.98	-108	-112	-149	-167	-255
3. net national product at factor cost	13308	14063	14891	17119	20080	20586	23647
4. indirect taxes less subsidies	948	1080	1265	1566	1784	2086	2336
5. net national product at market prices	14256	15143	16156	18685	21864	22672	25983
6. allowance for depreciation	736	811	930	994	1118	1213	1355
7. gross national product at market prices	14992	15954	17086	19679	22982	23885	27338
8. gross national product at factor cost	14044	14874	15821	18113	21198	21799	25002

(Continued Table 31)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
9. net domestic product at factor cost	13380	14161	14999	17231	20229	20753	23902	
10. less income from domestic product accruing to government	190	225	250	347	312	346	382	
11. income from domestic product accruing to private sector	13190	13936	14749	16884	19917	20407	23520	
12. national debt interest	59	72	106	116	125	175	240	
13. net factor income from abroad	-72	-98	-108	-112	-149	-167	-255	
14. transfer payments	166	191	192	201	226	266	329	
15. net private donations from abroad	28	35	34	34	40	72	87	
16. private income	13371	14136	14973	17123	20159	20753	23921	
								Source : C.S.O.

*crore= 10 million
†provisional

TABLE 32
Share of Public Sector in Domestic Product
(*at current prices*)

<i>Item</i>	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66+	1966-67+
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. gross domestic product	14116	14972	15929	18225	21347	21966	25257
2. gross product of public sector	1560	1754	2017	2328	2613	2947	3321
2.1 government administration	735	825	923	1063	1208	1355	1536
2.2 departmental enterprises	611	669	738	835	899	973	1074
2.3 non-departmental enterprises	214	260	356	430	506	619	711
3. gross product of private sector	12556	13218	13912	15897	18734	19019	21936
4. net domestic product	13380	14161	14999	17231	20229	20753	23902
5. net product of public sector	1444	1623	1858	2156	2407	2730	3046
5.1 government administration	735	825	923	1063	1208	1355	1536
5.2 departmental enterprises	547	609	665	761	815	890	968
5.3 non departmental enterprises	162	189	270	332	384	485	451
6. net product of private sector	11936	12518	13141	15075	17822	18023	20856

*crore = 10 million

+ provisional

TABLE 33

Estimates of total and per capita net domestic product for different States as prepared by the respective State Governments

State	<i>Current/constant prices</i>	Year	<i>Estimates of net domestic product</i>	
			Total (Rs. crores)	per capita (Rs.)
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh	Current	1965-66	1535.71	393
		1964-65	1555.15	406
		1963-64	1354.90	360
		1962-63	1191.31	322
		1961-62	1134.91	313
		1960-61	1012.16	284
		1955-56	746.44	226
	Constant (base : 1952-53)	1960-61	909.57	254
		1955-56	830.37	249
Assam	Current	1966-67	698.70	507
		1965-66	560.90	418
		1964-65	513.80	394
		1963-64	453.40	357
		1962-63	399.00	323
		1961-62	393.30	327
		1960-61	363.50	311
		1955-56	274.00	274
	Constant (base : 1948-49)	1966-67	378.30	274
		1965-66	369.90	276
		1964-65	363.50	279
		1963-64	343.70	271
		1962-63	314.50	255
		1961-62	318.90	266
		1960-61	296.20	254
		1955-56	267.90	268
Bihar	Current	1966-67	1495.27	291
		1965-66	1608.95	319
		1964-65	1349.09	272
		1963-64	1174.37	241
		1962-63	1045.34	219
		1961-62	983.30	209
		1960-61	935.34	203
		1955-56	659.29	150

(Continued Table 33)

(1)	(2)	(3)	(4)	(5)
Gujarat	Constant (base : 1948-49)	1966-67	873.62	170
		1965-66	1010.47	200
		1964-65	1007.78	203
		1963-64	992.19	209
		1962-63	966.08	202
		1961-62	936.60	199
		1960-61	905.70	196
		1955-56	685.94	156
		1965-66	966.83	416
		1964-65	971.16	429
J. & K.	Current	1963-64	836.03	380
		1962-63	753.94	351
		1961-62	750.61	359
		1960-61	693.91	339
		1955-56	473.48	259
	Constant (base : 1960-61)	1966-67	812.94	340
		1965-66	791.01	340
		1964-65	836.61	369
		1963-64	776.02	353
		1962-63	754.41	351
		1961-62	756.66	362
		1960-61	693.91	339
		1955-56	571.82	313
		1955-56	67.97	216
		1964-65	101.06	266
Kerala	Constant (base : 1955-56)	1965-66	93.29	250
		1964-65	94.83	259
		1963-64	92.69	258
		1962-63	91.27	259
		1961-62	89.00	257
		1960-61	86.04	253
		1955-56	67.97	216
		1964-65	676.26	370
		1963-64	556.93	311
		1962-63	520.00	297
	Current	1961-62	494.21	289
		1960-61	462.16	276
		1955-56	322.00	215
		1965-66	540.54	289
		1964-65	531.89	291
		1963-64	507.72	284
		1962-63	486.43	278
		1961-62	468.46	274
		1960-61	462.16	276
		1955-56	395.29	264

(Continued Table 33)

(1)	(2)	(3)	(4)	(5)
M.P.	Current	1966-67	1455.70	390
		1965-66	1252.10	350
		1964-65	1352.50	387
		1963-64	1146.70	335
		1962-63	1013.40	303
		1961-62	1006.60	307
		1960-61	915.70	285
		1955-56	643.50	224
	Constant (base : 1952-53)	1966-67	781.30	214
		1965-66	779.60	218
		1964-65	904.60	259
		1963-64	850.90	249
		1962-63	801.20	239
		1961-62	827.00	252
		1960-61	827.30	258
		1955-56	674.00	234
Madras	Current	1965-66	1593.50	435
		1964-65	1497.31	416
		1963-64	1370.98	387
		1962-63	1256.95	361
		1961-62	1214.75	354
		1960-61	1129.56	335
		1955-55	768.90	241
	Constant (base : 1960-61)	1965-66	1291.57	353
		1964-65	1275.57	354
		1963-64	1245.17	352
		1962-63	1212.77	348
		1961-62	1184.53	345
		1960-61	1129.56	335
		1955-56	963.54	303
Maharashtra	Current	1964-65	2230.80	524
		1963-64	2030.80	487
		1962-63	1748.20	428
		1961-62	1556.20	389
		1960-61	1532.80	392
		1955-56	1004.20	292
	Constant (base : 1955-56)	1966-67	1562.90	252
		1965-66	1471.40	338
		1964-65	1522.00	357
		1963-64	1452.10	348
		1962-63	1383.40	339
		1961-62	1352.60	338
		1960-61	1370.70	350
		1955-56	1004.20	292

(Continued Table 33)

(1)	(2)	(3)	(4)	(5)
Mysore	Current	1964-65	979.85	352
		1963-64	876.76	356
		1962-63	748.63	310
		1961-62	712.24	300
		1960-61	671.08	290
		1955-56	499.06	232
	(base : 1956-57)	1964-65	651.99	261
		1963-64	629.57	256
		1962-63	602.07	249
		1961-62	579.39	244
		1960-61	558.82	242
		1956-57	499.06	232
Orissa	Current	1963-64	561.39	304
		1962-63	492.64	273
		1961-62	443.86	253
		1960-61	428.91	249
		1955-56	315.22	199
	(base : 1960-61)	1964-65	485.44	258
		1963-64	516.23	280
		1962-63	472.87	262
		1961-62	440.70	251
		1960-61	428.91	249
		1955-56	362.43	229
Punjab	Current	1964-65	1277.50	576
		1963-64	1043.30	483
		1962-63	877.80	416
		1961-62	825.80	401
		1960-61	779.80	388
		1955-56	590.40	330
	(base : 1952-53)	1964-65	875.90	395
		1963-64	792.90	367
		1962-63	754.00	357
		1961-62	786.60	358
		1960-61	718.40	357
		1955-56	626.20	350
Rajasthan	Current	1965-66	851.53	385
		1964-65	863.51	400
		1963-64	711.61	336
		1962-63	705.49	342
		1961-62	690.44	343
		1960-61	636.61	323
		1955-56	456.11	260

(Continued Table 33)

(1)	(2)	(3)	(4)	(5)
	Constant	1966-67	567.45	251
	(base : 1954-55)	1965-66	541.52	245
		1964-65	554.91	257
		1963-64	508.35	240
		1962-63	518.52	251
		1961-62	508.64	252
		1960-61	473.53	241
		1955-56	413.17	236
U.P.	Current	1965-66	2968.91	364
		1964-65	2954.77	371
		1963-64	2247.91	288
		1962-63	1988.91	261
		1961-62	1913.67	257
		1960-61	1799.31	246
		1955-56	—	—
	Constant	1966-67	1896.85	228
	(base : 1960-61)	1965-66	1990.81	244
		1964-65	2061.10	259
		1963-64	1843.91	237
		1962-63	1837.90	241
		1961-62	1839.03	247
		1960-61	1799.31	246
		1955-56	—	—
West Bengal	Current	1964-65	1470.00	388
		1963-54	1339.00	361
		1962-63	1215.00	335
		1961-62	1159.00	328
		1960-61	1098.00	318
		1955-56	765.00	267
	Constant	1964-65	1278.00	337
	(base : 1951-52)	1963-64	1216.00	328
		1962-63	1103.00	304
		1961-62	1099.00	311
		1960-61	1105.00	320
		1955-56	848.00	296
H.P.	Current	1964-65	56.07	354
		1963-64	49.62	329
		1962-63	41.56	288
		1961-62	43.02	311
		1960-61	39.69	298
		1955-56	25.55	218

(Continued Table 33)

(1)	(2)	(3)	(4)	(5)
	Constant (base : 1950-51)	1965-66	35.64	213
		1964-65	38.66	244
		1963-64	35.80	237
		1962-63	32.13	223
		1961-62	33.90	245
		1960-61	31.33	235
		1955-56	25.62	219
Manipur	Current	1965-66	30.07	324
		1964-65	22.91	257
		1963-64	19.97	232
		1962-63	16.12	195
		1961-62	14.86	187
		1960-61	14.78	192
		1955-56	—	—
	Constant (base : 1960-61)	1965-66	19.93	215
		1964-55	16.30	182
		1963-64	15.87	185
		1962-63	14.75	178
		1961-62	14.23	179
		1960-61	14.78	192
		1955-56	—	—

*N.B. :—*Owing to the differences in concepts, methodology and source material used, the figures for different States are not strictly comparable.

TABLE 34
Index Numbers of Wholesale Prices in India-Existing and New Series (Annual Average)

Group	1962				1963				1964				1965				1966				1967				(Base 1961-62 = 100)			
	Existing*	New	Existing*	New	Existing*	New	Existing*	New	Existing*	New	Existing*	New	Existing*	New														
Food Articles	105.6	107.4	110.5	111.7	128.8	130.6	138.2	142.0	157.4	161.7	198.1	204.4	195.6	200.5														
Liquor & Tobacco	99.5	102.0	115.0	117.1	126.5	128.0	137.5	133.5	130.4	133.4	131.9	145.2	182.6	177.8														
Fuel, Power, Light, and Lubricants	100.8	102.1	111.7	114.9	117.0	119.7	121.6	122.4	130.7	132.5	148.0	139.8	156.6	147.2														
Industrial raw-materials	96.2	98.1	96.3	98.6	109.7	111.7	126.3	127.7	154.8	151.8	160.0	161.1	150.8	152.7														
Chemicals	112.1	111.4	112.6	113.5	114.4	116.4	119.1	123.0	131.5	138.8	139.6	154.7	148.4	165.3														
Machinery & Transport Equipment	102.6	103.5	107.1	107.2	110.6	110.8	117.0	116.1	127.4	124.1	135.9	131.1	136.9	132.3														
Manufactures	101.6	102.4	103.0	104.2	106.6	107.5	115.0	115.3	126.3	125.5	131.5	131.0	131.4	132.7														
(a) Intermediate products	101.3	102.7	99.6	103.9	106.6	109.1	120.3	121.4	128.8	135.8	155.4	147.1	144.8	144.6														
(b) Finished Products	101.8	102.4	103.6	104.3	106.6	107.0	114.2	113.9	124.5	123.0	127.1	127.0	129.0	129.8														
All Commodities (General)	102.6	104.2	101.9	108.0	118.5	119.3	128.9	129.1	146.4	144.5	169.2	166.2	167.5	165.3														

*The indices with 1952-53 base adjusted to 1961-62 base.

Source : *A Note on the Index Numbers of Wholesale Prices in India, Office of the Economic Adviser, Government of India, 1969.*

TABLE 35

**Gross Capital Formation by Public and Private Sectors
1950-51 to 1964-65
(at 1960-61 prices)**

(Rupees crores)

Year	<i>Gross capital formation</i>		
	Total	Public	Private
(1)	(2)	(3)	(4)
1950-51	1076	302	774
1951-52	1258	374	884
1952-53	983	320	663
1953-54	1341	354	987
1954-55	1528	557	971
1955-56	1721	607	1114
1956-57	2398	769	1629
1957-58	1835	934	901
1958-59	2126	877	1249
1959-60	2127	1032	1095
1960-61	2570	1115	1455
1961-62	2627	1086	1541
1962-63	2736	1310	1426
1963-64	3202	1454	1748
1964-65	3616	1547	2069

Source : S. G. Tiwari, *Some Aspects of Economic Growth in India, 1950-51 to 1964-65*, a paper submitted at the Sixth Indian Conference on Research in National Income.

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